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**Organization Is Bringing about a Peace Conference between the Retailer, Wholesaler and Manufacturer and Is Making Commercial War Indefensible, because Coöperation Is Taking the Place of Competition and Serves the People Best. Competition Is the Life of All Activities until It Becomes Destructive.**

Vol. XXIV, No. 10 OCTOBER, 1935

# JOURNAL
## OF THE
# AMERICAN PHARMACEUTICAL ASSOCIATION

TRADE MARK

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**THE 84th ANNUAL MEETING OF THE AMERICAN PHARMACEUTICAL ASSOCIATION WILL BE HELD IN DALLAS, TEXAS, 1936.**

The 1936 Meetings of the American Association of Colleges of Pharmacy, the National Association of Boards of Pharmacy, Conference of Pharmaceutical Association Secretaries, of the Pharmaceutical Law Enforcement Officials and the Plant Science Seminar will also be held in Dallas, Texas.

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CARL AUGUST ROJAHN.

JOURNAL OF THE AMERICAN PHARMACEUTICAL ASSOCIATION

VOL. XXIV OCTOBER, 1935 No. 10

## CARL AUGUST ROJAHN, HONORARY MEMBER OF THE AMERICAN PHARMACEUTICAL ASSOCIATION.

Prof. Dr. Carl August Rojahn, who was elected honorary member of the AMERICAN PHARMACEUTICAL ASSOCIATION at the Portland meeting, was born September 23, 1889, in Duisburg, Germany. He served a 3-year apprenticeship in the Pellican Apotheke, Dueseldorf, where he passed the examinations. He studied in Marburg and then in Braunschweig, where he passed further examinations and, in Rostock, those for chemist. Engaged in research on Pyrazol-Ketone, he received the degree of Doctor of Philosophy, with honor.

He was military chemist and then assistant at the Chemical Institute of the University of Frankfurt from 1917 to 1919; later, assistant at the Pharmaceutical Institute in Frankfurt. He continued similar work at the Pharmaceutical Institute of Braunschweig and, thereafter, was named professor and head of the Pharmaceutical Division of the Chemical Institute. He was then called to Freiburg and a year later elected professor and divisional director at the Chemical and Pharmaceutical Institute of the University of Halle; in 1929, he was named director of the Institute.

Dr. Rojahn has been very active in research, pharmaceutical analyses and investigations of various galenicals; all of his work is done carefully and thoroughly and is marked by his personality. He is author of the revised edition of Autenrieth and of the volume on Pharmaceutical Practice.

H. Beckurts, in the foreword of the German YEAR BOOK for 1924, refers to Dr. Rojahn as a former assistant, whom he had secured as co-worker for the division of Chemistry of Foods. Since 1928 he has been editor of the YEAR BOOK and the value of this work has been enhanced by the many sources of general information which Dr. Rojahn has at his command. He is constantly interested in whatever serves the profession and German pharmacy is marked by his activities.

Dr. Rojahn has been honored with the Prussian life-saving medal awarded for the saving of life and risking his own. Opportunity is taken to welcome the Honorary Member.

# EDITORIAL

E. G. EBERLE, EDITOR 2215 Constitution Ave., WASHINGTON, D. C.

## DEDUCTIONS FROM THE PAPERS OF THE AMERICAN PHARMACEUTICAL ASSOCIATION.

MANY papers of the Scientific Section of the AMERICAN PHARMACEUTICAL ASSOCIATION related to Pharmacopœial and National Formulary subjects, not only contributing to the standards, but as preparatory work for establishing and improving them, if possible. A number of the papers were prompted by the conference on the study of opium assays by the Committee upon Uniform Method of Opium Assay, which has been working under the auspices of the Health Committee of the League of Nations since 1931. It is hoped to present some of these in an early issue of the JOURNAL. Quite a few dealt with improved assay and standardizing methods; ergot and antiseptics were among the outstanding subjects. The list shows a studiously prepared program and the phases to which the contributors devote careful study and investigation; there is no desire to place the value of the research of one above the other, but to briefly express appreciation for the work reported at these sessions.

The Section on Practical Pharmacy considered papers on improved methods of preparation and dispensing, and quite a number added interest to the sessions by papers dealing with various phases of hospital pharmacy and prescription practice.

The Section on Education and Legislation gave considerable time to the study of fair methods of practice and business conduct. The public attitude to the retailer and the relationship of other professions with that of pharmacy proved of interest.

The Section on Commercial Interests devoted time and attention to uniformity in prescription pricing, the prescription department, publicity, drug store methods, the effect of Fair Trade Acts, the place of the pharmacist in the community and the commercial training in business and educational institutions.

Seldom has a more interesting program been presented by the Section on Historical Pharmacy. A number dealt with early materia medica and pharmacists of earlier periods; several of the papers have been published and it is interesting to note that a pharmacist, David Henshaw, was a Secretary of the Navy; copy has been made of an early engraving which may be found in this issue of the JOURNAL.

As heretofore stated, there is no desire to valuate the papers; the purpose of the comment is to give credit to all who made the interesting sessions possible; other divisions of the meeting will be given consideration in succeeding issues and in the meantime some of the papers will be published.

## EDUCATION OF THE PUBLIC IN FAIR TRADE PRACTICES.

IT HAS been said in these columns that the underlying motive of National Pharmacy Week is the education of the public relative to the mission and service of pharmacy. This includes also the possibility of the votaries deriving a living income by rendering service and that the pharmacist should not be subjected to the unfair methods which are practiced by certain activities and have become more or less established, for thereby the professional man and the small dealers, as well

as the community, suffers; advancement in education is essential to good public health service and depends on the success of those engaged in its divisions.

Senator Millard Tydings, at the meeting of the National Association of Retail Druggists, voiced a vigorous defense of the demand of retailers for stabilization of the activity. It is evident from his remarks that, in his opinion, regulatory legislation should be enacted.

The subject of fair practices has been studied and the viewpoints discussed by various organizations of the drug industries, but the conclusions and methods for making regulations practical and effective present as great difficulties as the study of the conditions which make legislation necessary. The subject is being carefully studied and a general procedure has been formulated, using as a basis, in part, legislation that has been enacted, and the successful results by the committee will contribute an outstanding service to the public.

The coördinated divisions are concerned in the success. President A. Kiefer Mayer, of the National Wholesale Druggists' Association, said, in substance, "the retailers' interests are our interests as an unwritten by-law of the Association;" he emphasized the necessity for sound distributive practices which will give the retailers rightful consideration and show the wholesalers a fair margin for their services. He urged support for manufacturers who are following policies of distribution which are legally sound and recognize both the essential service and the economic necessity of the wholesaler. A circumspection shows the concern of all divisions and should result in a working together with thoughtful consideration of those served. The message of the comment is to work coördinately in educating the public relative to their interest in bringing about honesty and fairness in all activities.

## THE RELATIVE POSITIONS IN MATERIA MEDICA OF INORGANIC, SYNTHETIC ORGANIC AND NATURAL ORGANIC SUBSTANCES.

President Roy Gardner, in an address to Section "O," Australian and New Zealand Association for the Advancement of Science, said he felt "very definitely that this is a time when a general broadening of outlook in connection with scientific matters is urgently required, and it behooves scientific workers of all ranks and in all divisions of science to make an earnest effort to see their own positions in proper perspective."

Quoting other portions of his address—"Science is very young, but we of the present generation, being ourselves just too young to have taken part in the early struggle of science for recognition, can very easily forget the fact and overlook its implications. It is well for us to remind ourselves occasionally that, for instance, less than two ordinary lifetimes have elapsed since the isolation of the first alkaloid."

Concluding his address he reminded his hearers that "it is vitally necessary to consider not only the growth of science, but also the relationship of science to other aspects of human life. There are not lacking those who blame the growth of science for most of the world's present troubles; on the other hand, we are told that the remedy lies in more science. The truth seems to be that, while science should, and must, continue to go ahead, civilization in its other aspects must adjust itself to that progress—must use the fruits of progress properly—or the result will be chaos." In his opinion "it would be conducive to the necessary adjustment for those who

best understand science—the scientific workers themselves—to interest themselves more in fields of work other than the scientific." "Pharmacy," he said, "is an occupation that lies on the border-line between science and commerce. Those pharmacists who take seriously their duty to the world are well placed for obtaining an enlightened view of science on the one hand and of economic and ethical considerations on the other." He appealed to them to take such a view and to act accordingly. To some, such a remark may appear out of place here, but he did not take that view. Pharmacy as a field of work dealing with health has its own special responsibility, and, in addition, a share of the general responsibility for watching the growth of Science, and seeing that the world makes a right use of it for the benefit of mankind generally.

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THOUGHTS FROM AN ADDRESS BEFORE WISCONSIN STATE PHARMACEUTICAL ASSOCIATION BY RALPH M. CARTER, M.D.*

"The pharmacist does not carry his large and heterogeneous stock because he wants to, but just because the public demands it, and the very physician who criticizes the pharmacist the most would in all probability be one of the last ones who would be willing to do without the many services of the ordinary drug store. However, on the other hand, if a pharmacist really desires prescription business, he should take a professional attitude toward this business, and see that his prescription department is thoroughly equipped, and conducted in an ethical manner.

"Both professions must try to understand each other's problems, and by means of interprofessional meetings and relationships gradually work out a solution which is satisfactory to both sides. This cannot be accomplished over night, but I feel that with earnest effort on both sides, it can eventually be done. To fulfil the task requires patience, understanding, tolerant minds, education, and last, but not least, so far as is possible, a return to ancient ideals."—*Wisconsin Druggist* for October.

* President-elect of Wisconsin State Medical Association.

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This window was arranged by Frank Nau, Pharmacist of Portland; greetings are extended to the AMERICAN PHARMACEUTICAL ASSOCIATION in lower right-hand frame. Chiron is shown in the center.

# SCIENTIFIC SECTION

BOARD OF REVIEW OF PAPERS.—*Chairman*, F. E. Bibbins, George D. Beal, L. W. Rising, H. M. Burlage, L. W. Rowe, John C. Krantz, Jr., Heber W. Youngken.

(*To be revised.*)

## THE QUESTION OF ASSAYING ERGOTOCIN, THE NEW ERGOT PRINCIPLE.*,1,2

BY EDWARD E. SWANSON, CHESTER C. HARGREAVES AND K. K. CHEN.

Ergotocin is the new ergot principle isolated by Kharasch and Legault (1) in collaboration with Adair and Davis (2). It melts with decomposition at 155° C., has the probable empirical formula of $C_{21}H_{27}O_3N_3$, and forms easily soluble salts such as the maleate. In a pharmacological paper by Davis, Adair, Chen and Swanson (3), evidence has been presented that the action of ergotocin is different from that of ergotamine or ergotoxine, and it should therefore be standardized by newly developed methods. The substance has a specific and prompt oxytocic effect upon the postpartum human uterus, and offers therapeutic possibilities in obstetrical practice. The present paper is concerned with the comparison of six different methods used in our laboratories for the examination of ergotocin—the polarimetric, the colorimetric, the U. S. P. cock's comb, the isolated rabbit's uterus, the postpartum dog's uterus, and the postpartum human uterus. In all instances, ergotocin maleate was employed. As shown in Table I, a total of 35 lots were assayed. Those numbered 1, 2 and 3 were repeatedly purified and set aside as laboratory standards; those numbered 5, 7, 14, 15, 16, 17, 18, 19, 21, 24, 25, 27, 31, 33, 34 and 35 were factory lots for marketing; and the remaining ones were made by modified processes and subjected to similar tests. The majority of the samples were assayed by three or four methods, only four lots being standardized by the six methods. The authors owe their indebtedness to Drs. Fred. L. Adair and M. Edward Davis, Department of Obstetrics and Gynecology, University of Chicago, for the clinical assay which was carried out by a method developed in their clinic (4), to Dr. E. C. Kleiderer for the polarimetric examination, and to Mr. A. N. Stevens for the colorimetric determination.

### RESULTS.

*1. Isolated Rabbit's Uterus Method.*—Unlike ergotamine and ergotoxine, ergotocin stimulates the isolated rabbit's uterus in dilute concentrations. The response of the mature organ appears to be proportional to the dose, which fact may be utilized for the quantitative evaluation of the product, just as the isolated guinea pig's uterus has been used for the assay of posterior pituitary extracts. Figure 1 shows a typical example of the experiments. It may be interesting to mention here that all the lots showing 100 per cent potency by this method proved to be clinically satisfactory.

In a previous communication (3), it has already been emphasized that ergotocin does not antagonize or inhibit the action of epinephrine, so that the well-known

* Scientific Section, A. PH. A., Portland meeting, 1935.

[1] From the Lilly Research Laboratories, Indianapolis.

[2] Eli Lilly and Company introduced this new ergot principle under the name of *Ergotrate*.

Broom-Clark method (5) is useless in determining its potency. On the contrary, the effect of ergotocin is diminished after the previous application of ergotamine, such as on the isolated rabbit's intestines. The same can be demonstrated on the isolated rabbit's uterus after ergotoxine, as shown in Fig. 2. In fact, ergotocin can almost take the place of epinephrine in the performance of the Broom-Clark test.

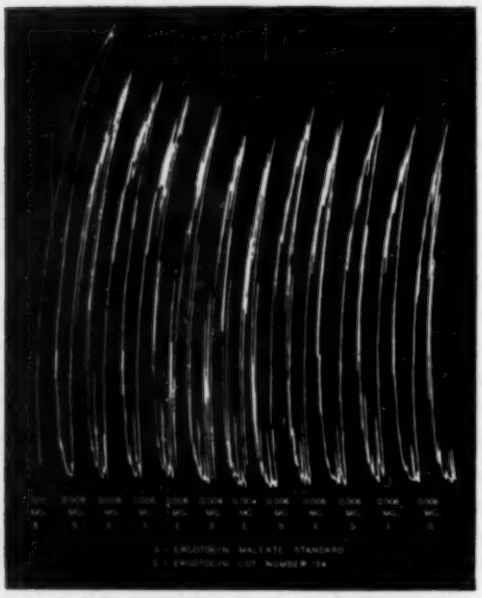

Fig. 1.—An example of ergotocin assay by the isolated rabbit's uterus method.

*2. U. S. P. Cock's Comb Method.*—Using ergotoxine ethanesulphonate as the standard, the first three lots of ergotocin proved to be 24 to 43 per cent more potent, but subsequent factory lots showed the same activity as the standard, with the exception of one (lot No. 34) which was 12 per cent in excess. In no instance was ergotocin maleate found to be weaker than ergotoxine ethanesulphonate, gram for gram

*3. Polarimetric Method.*—In aqueous solution, ergotocin maleate is dextrorotatory and has a specific rotation $[\alpha]_D^{28}$ of about $+52°$. From Table I, it may be noted that lots having a specific rotation $[\alpha]_D^{28}$ less than $+50°$ were correspondingly low in physiological potency. The highest reading ever recorded was $+55.4°$. Only in one case (lot No. 6) did the optical rotation deviate from the biological assay.

*4. Colorimetric Method.*—The Smith colorimetric method (6) with *p*-dimethylamino-benzaldehyde can be similarly applied to ergotocin. The readings by this method, as shown in Table I, check within 10 per cent with the results obtained by

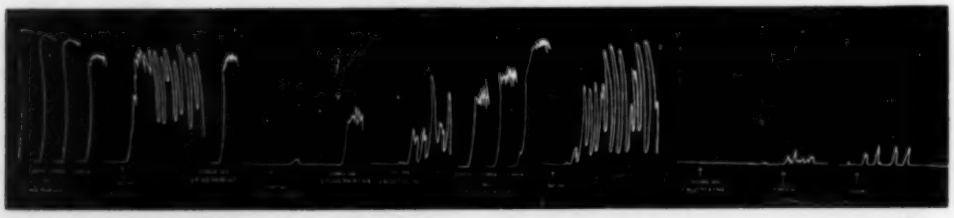

Fig. 2.—Absence of inhibitory action of ergotocin over epinephrine on isolated rabbit's uterus, and diminution of ergotocin action by previous use of ergotoxine.

the isolated rabbit's uterus method; only in one case (lot No. 14) the difference is greater, that is, 17 per cent.

*5. Postpartum Dog's Uterus Method.*—The technique of this method has been described by one of us (E. E. S.) (7). The results obtained designate the minimal

effective dose given either by vein or by a stomach tube. In the few tests carried out, the data are on the whole confirmatory of those by other methods (Table I).

TABLE I.—ASSAY OF ERGOTOCIN MALEATE BY VARIOUS METHODS.

| Lot No. | Isolated Rabbit's Uterus: Lots 1, 2 and 3 = 100. Per Cent. | U. S. P. Cock's Comb: Ergotoxine = 100. Per Cent. | Specific Rotation. $[\alpha]_D^{25}$. | Colorimetric: Lots 1, 2 and 3 = 100. Per Cent. | Postpartum Dog's Uterus, By Vein. 0.01 Mg. per Kg. | Postpartum Dog's Uterus, By Stomach Tube. 0.2 Mg. per Kg. | Postpartum Human Uterus. 0.4 Mg. by Mouth. |
|---|---|---|---|---|---|---|---|
| 1 | 100 | 135 | +52.0 | ... | Active | Active | Typical response |
| 2 | 100 | 125 | +52.0 | ... | Active | Active | Typical response |
| 3 | 100 | 143 | +52.0 | ... | .... | .... | Typical response |
| 4 | 0 | ... | 0.0 | ... | .... | .... | ..... |
| 5 | 100 | ... | +51.9 | ... | .... | .... | ..... |
| 6 | 80 | ... | +54.5 | 89 | .... | .... | ..... |
| 7 | 100 | 100 | +51.4 | 90 | Active | Active | Typical response |
| 8 | ... | ... | 0.0 | 0 | .... | .... | ..... |
| 9 | 5 | ... | 0.0 | 0 | .... | .... | No response |
| 10 | ... | ... | 0.0 | 0 | .... | .... | ..... |
| 11 | 6 | ... | 0.0 | 0 | .... | .... | No response |
| 12 | ... | ... | 0.0 | 0 | .... | .... | ..... |
| 13 | 30 | ... | +19.8 | 34 | .... | .... | ..... |
| 14 | 100 | 100 | +52.3 | 83 | Active | Active | Typical response |
| 15 | 100 | 100 | +51.8 | ... | Active | .... | Typical response |
| 16 | 100 | 100 | +50.9 | ... | .... | .... | Typical response |
| 17 | 100 | 100 | +51.0 | ... | .... | .... | Typical response |
| 18 | 100 | 100 | +52.8 | 100 | .... | .... | Typical response |
| 19 | 100 | 100 | +52.8 | ... | .... | .... | Typical response |
| 20 | ... | ... | +17.9 | ... | .... | .... | ..... |
| 21 | 100 | ... | +51.5 | ... | .... | .... | Typical response |
| 22 | 6 | ... | +12.9 | ... | .... | .... | ..... |
| 23 | 12 | ... | +11.5 | 10 | Inactive | .... | ..... |
| 24 | 100 | ... | +50.3 | ... | .... | .... | Typical response |
| 25 | 100 | ... | +55.4 | 100 | Active | Active | Typical response |
| 26 | 25 | 20 | +19.1 | 32 | .... | .... | ..... |
| 27 | 100 | 100 | +51.2 | 100 | Active | .... | Typical response |
| 28 | 40 | 40 | +11.3 | ... | .... | .... | ..... |
| 29 | 53 | ... | +30.5 | 55 | .... | .... | ..... |
| 30 | 80 | ... | +43.3 | 83 | .... | .... | ..... |
| 31 | 100 | 100 | +50.0 | ... | Active | .... | Typical response |
| 32 | 75 | ... | +37.1 | 66 | Inactive | .... | ..... |
| 33 | 100 | 100 | +52.9 | ... | .... | .... | Typical response |
| 34 | 100 | 112 | +52.0 | 100 | Active | .... | Typical response |
| 35 | 100 | ... | +50.0 | ... | .... | .... | Typical response |

*6. Postpartum Human Uterus Method.*—This constituted the ultimate and specific test for each lot of ergotocin. Although an amount of 0.4 mg. by mouth frequently produced more than the minimal response, this arbitrary dose usually gave rise to definite results in those individuals who were less suitable to the drug. A typical response meant a prompt tetanic contraction in 7 to 8 minutes, followed by rhythmic contractions with an increase in tone, lasting for more than 2 to 4 hours. According to Davis, Adair and their associates (2), about one-half of the multiparous patients can serve as testing subjects.

## DISCUSSION.

In all respects, the isolated rabbit's uterus method yields numerical figures which are most helpful to the chemist. The oxytocic action typifies ergotocin and eliminates ergotamine and ergotoxine, and the prolonged rhythmic contractions distinguish it from histamine and tyramine, both of which cause brief responses. One can, therefore, regard the isolated rabbit's uterus method, the simplest laboratory test, with considerable degree of specificity. To insure fully the therapeutic value of the product, a clinical assay should be carried out. The postpartum dog's uterus method appears to be less sensitive than the clinical method. The remaining three tests are essential for confirmatory purposes, although they are of secondary importance on account of their lack of specificity. From the above data, it may be suggested that every lot of ergotocin should be first examined polarimetrically, assayed colorimetrically and physiologically by the isolated rabbit's uterus method, and finally, tested clinically. This will result in a uniform product for medical use.

The authors believe that the same methods, in addition to the analytical and chemical, will settle the question of identity or difference between ergotocin on the one hand and the other newer substances from ergot on the other, such as sensibamine of Chinoin Gyógyszer és Vegyeszeti Termékek Gyára, R. T. (8), ergoclavin of Küssner (9), ergometrine of Dudley and Moir (10), ergostetrine of Thompson (11), and ergobasine of Stoll and Burckhardt (12) and Jacobs and Craig (13). Comparisons should be made, of course, with the same salt and under the same conditions.

## SUMMARY.

Thirty-five lots of ergotocin were compared by six methods of testing: the isolated rabbit's uterus, the U. S. P. cock's comb, the polarimetric, the colorimetric, the postpartum dog's uterus and the postpartum human uterus methods. With a few exceptions, the results by the different procedures appear to confirm one another.

Ergotocin may be assayed by the isolated rabbit's uterus method, supplemented by the clinical method. Polarimetric and colorimetric tests may furnish preliminary information concerning the purity of the product, but should always be confirmed by physiological and clinical experiments.

In the light of our present knowledge, the U. S. P. cock's comb method is not specific enough for the assay of ergotocin. The Broom-Clark method is entirely useless for the same purpose.

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# DRUG EXTRACTION. V. THE EXTRACTION OF BELLADONNA ROOT WITH GLYCERINIC MENSTRUA.*[1]

BY WILLIAM J. HUSA[2] AND LOUIS MAGID.

Tests were carried out to determine the efficiency of various glycerin-alcohol-water mixtures in the extraction of belladonna root.

## EXPERIMENTAL PART.

100-Gm. portions of belladonna root in No. 40 powder were percolated by Type Process B with four different menstrua, *i. e.*, (A) alcohol 5 vol.—water 1 vol., (B) alcohol 425 vol.—water 100 vol.—glycerin 75 vol., (C) alcohol 325 vol.—water 200 vol.—glycerin 75 vol., and (D) alcohol 200 vol.—water 100 vol.—glycerin 100 vol. The preceding menstrua constituted Menstruum I, 100 cc. being used; a mixture of alcohol 5 vol.—water 1 vol. was used as Menstruum II. In each case the drug was moistened with 60 cc. of Menstruum I, and allowed to macerate for 6 hours before packing. The drug moistened with Menstruum A occupied 250 cc. after packing, while with Menstrua B, C and D the volume after packing was 265 cc. After packing, maceration was allowed to proceed for 24 hours. The percolates were then collected in three fractions, 80 cc., 100 cc. and 300 cc., respectively. The first 80 cc. was collected at the rate of 10 drops per minute, and the remainder of the percolate at 20 drops per minute.

TABLE I.—EFFECT OF VARIOUS GLYCERINIC MENSTRUA ON THE EXTRACTION OF POWDERED BELLADONNA ROOT.

| | Grams of Alkaloid in Various Fractions of Percolate. Menstruum. | | | |
|---|---|---|---|---|
| Percolate. | A. | B. | C. | D. |
| 80 cc. | 0.429 | 0.420 | 0.372 | 0.337 |
| 100 cc. | 0.052 | 0.066 | 0.088 | 0.092 |
| 300 cc. | 0.000 | 0.000 | 0.018 | 0.042 |
| Totals | 0.481 | 0.486 | 0.478 | 0.471 |

## DISCUSSION OF RESULTS.

The results in Table I show that glycerin retards the extraction of the alkaloids of belladonna root. The retardation increases with increasing concentration of glycerin and with decreasing concentration of alcohol. The results of the tests with glycerinic menstrua uphold the general opinion that glycerin does not aid in the extraction of alkaloidal drugs. Firlas (1) has stated that the presence of glycerin in the menstruum does not affect the amount of alkaloids in fluidextracts of cinchona, hydrastis and ergot. Scoville (2) showed that glycerin in the men-

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* Scientific Section, A. PH. A., Portland meeting, 1935.

[1] This investigation was aided by a grant from the AMERICAN PHARMACEUTICAL ASSOCIATION Research Fund.

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struum retarded extraction in yellow cinchona and hydrastis, although it aided in the extraction of red cinchona.

In the present experiments, the passage of the glycerinic Menstrua I through the drug could be observed due to the fact that the color became darker than that of Menstruum II. The glycerinic Menstruum B was apparently displaced entirely into the first percolate, while C was displaced into the second percolate, and D was not entirely displaced until the third percolate was being collected. It appears that the retardation of the extraction of the alkaloids of belladonna root with the use of glycerinic menstrua may be related to the difficulty of displacement by the non-glycerinic menstruum which follows.

SUMMARY.

Percolation experiments with glycerinic menstrua indicate that glycerin retards the extraction of alkaloids from belladonna root. The retardation is greater with increasing concentration of glycerin and with decreasing concentration of alcohol.

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## ASSAY FOR PHENOL IN OFFICIAL PREPARATIONS.*[1]

BY GLENN L. JENKINS AND MELVIN F. W. DUNKER.[2]

Numerous colorimetric and volumetric methods have been proposed for the determination of phenols in general (1, 2, 3, 4). The most widely accepted procedure is the well-known iodometric method used in the official assay (5) of phenol and liquefied phenol. Redman and Rhodes (6) have shown that the period of shaking after the addition of the Koppeschaar's Solution and acid, and also after the addition of the potassium iodide may be reduced to one minute if continuous shaking is employed. Olivier (7) had previously pointed out that the time period could be reduced to five minutes. Corfield and Mundy (8) stated that the iodometric method is readily applicable to the assay of phenol containing preparations such as lotions and gargles which do not contain ingredients that react with free bromine. Bauer (9) reported that the official method of assay for phenol could be applied to the assay of Aqua Phenolata N. F. V with accurate results. The assay of preparations containing ingredients that react with bromine necessitates the quantitative separation of the phenol either by distillation or extraction. Corfield and Mundy (8) and Smelt (10) recommend extraction with warm dilute sodium hydroxide solution or preferably distillation for preparations such as phenol ointment, gargle of potassium chlorate with phenol, glycerite of phenol, lozenges and suppositories.

The procedure employed for the estimation of phenol in the study here reported was as follows:

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A sample containing about 0.04 Gm. of phenol was weighed or measured, or a volume of dilution containing about 0.04 Gm. of phenol was measured into a glass-stoppered flask, diluted, 30 cc. 0.1*N* Koppeschaar's solution added, the neck of the flask rinsed down, 5 cc. hydrochloric acid quickly introduced, the stopper replaced and the flask shaken vigorously at intervals during five to ten minutes. Being careful to allow no bromine vapors to escape, 5 cc. of potassium iodide solution (1 to 5) was then added, and the flask shaken vigorously during three to five minutes. The liberated iodine was then titrated with 0.1*N* sodium thiosulphate solution, after the addition of 1 cc. of chloroform.

The phenol employed was purified by distillation. All reagents were made according to the methods of the U. S. Pharmacopœia X. The preparations were made by official methods except that the phenol was carefully weighed on an analytical balance and all liquid preparations were made to volume in calibrated volumetric apparatus.

GLYCERITE OF PHENOL.

Two lots of glycerite of phenol (11) were prepared to contain not less than 17.60 per cent w/v of phenol. Samples of 10 cc. were diluted to 100 cc., and 2-cc. portions of this dilution assayed with results as follows:

(1) 18.37; 18.32; 18.28; 18.51; 18.60; 18.57; 18.51 per cent phenol w/v.
(2) 17.83; 18.09; 18.16 per cent phenol w/v.

When 10-cc. portions of the glycerites were distilled in all glass apparatus, aliquots of the distillate on titration yielded:

(1) 18.57; 18.57 per cent phenol w/v.
(2) 17.94; 17.94 per cent phenol w/v.

A third lot of glycerite containing 15.67 per cent phenol by weight, prepared by incorporating a weighed quantity of crystalline phenol in the glycerin-sodium citrate mixture, yielded results as follows when weighed 10-cc. portions were diluted to 1000 cc., and 25-cc. samples titrated directly:

(3) 15.62; 15.65; 15.54; 15.65 per cent phenol w/w.

Blank determinations revealed that no bromine was consumed by the glycerin and the sodium citrate.

PHENOLATED SOLUTION OF IODINE.

A quantity of phenolated solution of iodine (12) prepared in a tightly stoppered flask to contain 0.59 per cent phenol w/v yielded:

0.56; 0.58; 0.59 and 0.58 per cent phenol w/v when samples corresponding to 6 cc. of the solution were titrated directly.

PHENOLATED OIL.

A quantity of phenolated oil (13) was prepared to contain 5.37 per cent by weight of phenol. Samples of four to five Gm. were accurately weighed, diluted with about 25 cc. petroleum benzin and shaken out with 25-cc. portions of distilled water until all of the phenol was extracted (usually five successive extractions were sufficient if the amount of phenol did not exceed 0.25 Gm.). The formation of emulsions was rather rare and offered no difficulty. The combined aqueous extractives were made up to 200 cc., and 30-cc. aliquots were titrated with results as follows:

5.30; 5.37; 5.34 and 5.29 per cent phenol w/w.

Distillation of the phenol from 2.5-Gm. samples and titration of an aliquot of the distillate yielded:

5.34 and 5.37 per cent phenol w/w.

### CAMPHORATED PHENOL.

A sample of camphorated phenol (14) was prepared to contain 32.71 per cent phenol by weight. Suitable assay samples when extracted and assayed in the same manner as phenolated oil yielded:

32.49; 32.31; 32.46; 32.38 and 32.35 per cent phenol w/w.

### PHENOL OINTMENT.

An ointment of phenol (15) prepared to contain 2.47 per cent phenol by weight yielded results as follows when samples were assayed as described under phenolated oil:

2.34; 2.32; 2.35 and 2.38 per cent phenol w/w.

Samples assayed by the method proposed for inclusion in the U. S. Pharmacopœia XI (16) which consists of heating weighed samples at 115° C. for $1^1/_2$ hours and calculating the loss in weight as per cent phenol yielded:

3.39; 3.16; 2.55 and 4.42 per cent phenol by weight.

Two samples heated for an additional hour at 115° C. continued to lose weight. Samples of ointment base heated under the same conditions lost weight as follows:

0.44; 0.075; 1.04 and 0.35 per cent.

It is evident that some of the base volatilized on heating, and that the method proposed for inclusion in the Pharmacopœia is unsatisfactory.

### SUMMARY.

1. A number of official phenols containing preparations have been assayed by a modified Koppeschaar method.

2. Glycerite of phenol and phenolated solution of iodine can be assayed directly for phenol after dilution without separating the phenol.

3. Camphorated phenol, phenolated oil and ointment of phenol can be assayed satisfactorily after extraction of the phenol with water.

4. The method of assay for ointment of phenol proposed for inclusion in the U. S. Pharmacopœia XI is subject to variations due to the volatility of the constituents of the ointment base.

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# DATURIC ACID.[1,2]

BY RALPH W. CLARK.[3]

The name daturic acid was first applied by Gérard in 1890 to an acid obtained from the oil of the seeds of *Datura Stramonium* L. to which he assigned the formula $C_{17}H_{34}O_2$ (1). The pronouncement was received with skepticism because the existence of a homologue of acetic acid with seventeen carbon atoms, though previously made, had also been denied.

Thus Chevreul as early as 1811 had isolated an acid, m. p. 50–60°, from lard to which he assigned the name acide margarique (2). However, he admitted that the existence of this acid was not as certain as that of either stearic acid or oleic acid (3). Liebig, in 1840, expressed the view that margaric acid is a combination of oleic and stearic acids (4). Varrentrapp (5), in the same year, obtained like analytical results. Like Redtenbacher (6), he prepared his margaric acid by distillation of stearic acid.

Fremy (7), in 1840, also claimed that the margaric acid obtained by Felouze and Boudet in 1839 from palm oil was identical with a new acid obtained by him from palm oil which he named palmitic acid. This viewpoint was supported by Stenhouse (8). Laurent and Gerhardt (9) held stearic and margaric acids to be different physical modifications of the same acid, $C_{17}H_{34}O_2$, comparable to "l'acide tartrique" and "l'acide metatartrique."

New direction was given in 1851 to the investigation of fatty acids by Heintz (10) who effected a separation of the free fatty acids by fractional crystallization. He claimed to have isolated margaric acid, m. p. 60°, from human fat. A year later (11) he reported margaric acid, m. p. 60°, as principal constituent of spermaceti. However, in the same year, 1852, he pointed out in connection with his investigation of mutton-tallow (12) that palmitic and stearic acids yield mixtures with the properties of new acids. These mixtures, could not be resolved into the individual acids by recrystallization, but only by fractional precipitation by means of magnesium or barium acetate. He therefore regarded margaric acid as a mixture of one part stearic acid with nine or ten parts of palmitic acid. He even went so far as to express the opinion that fatty acids with an uneven number of carbon atoms did not occur in natural fats. All occurrences of margaric acid previously reported he regarded as mixtures of palmitic and stearic acids. The so-called margaric acid found by Collet (13) he recognized as palmitic acid (14).

Such was the state of affairs with reference to a fatty acid with seventeen carbon atoms when daturic acid was discovered. Hence its existence as a chemical individual was questioned.

A new chapter in the history of daturic acid was opened up in 1912 when Meyer and Beer (15) (after Meyer and Eckert (16) had obtained daturic acid from coffee bean oil), pointed out that their daturic acid, obtained upon fractional crystallization of the lithium salts of the fatty acids of datura oil, was identical with Krafft's synthetic margaric acid. The melting point of their acid, 59.5°,

[1] Scientific Section, A. PH. A., Portland meeting, 1935.

[2] Part of a thesis submitted for the degree of Doctor of Philosophy, University of Wisconsin, 1933.

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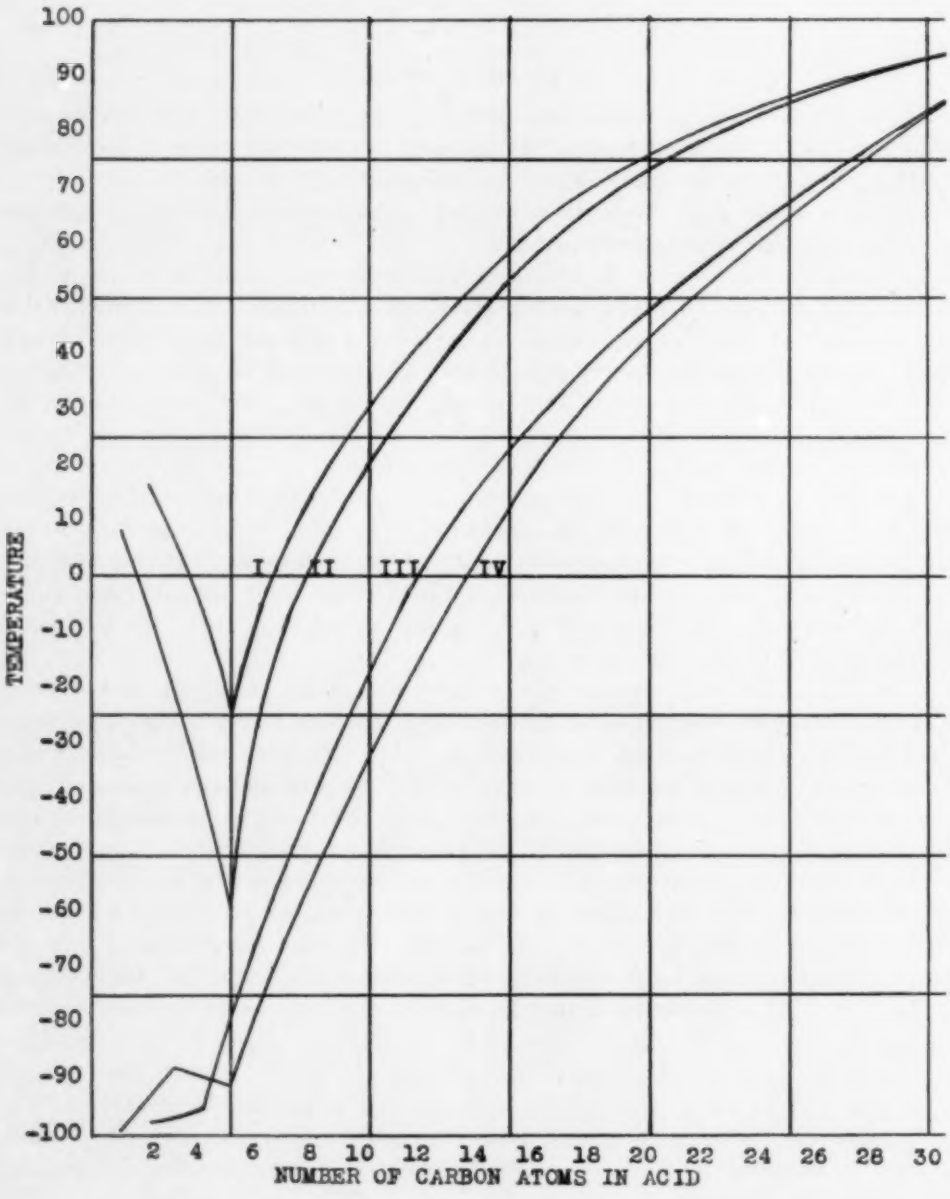


Fig. 1.—Melting points of fatty acids and their methyl esters. Curve I, Fatty Acids Having an Even Number of Carbon Atoms; II, Odd Number; III, Methyl Esters of Fatty Acids Having an Even Number of Carbon Atoms; IV, Odd Number. The Curves were prepared from data obtained from Reid, College Organic Chemistry, 223 and 290 (1929); "Lewkowitsch, Chem. Tech. Fats, Oils and Waxes," 1, 117 (1921); Levenne and Taylor, *J. Biol. Chem.*, 69, 921 (1924); "Beilstein, Handbuch der Org. Chem.," 2, 7–186 (1929), and earlier editions; "International Critical Tables." A great variation in melting points was observed in the literature mentioned above. The curves were prepared from most frequently appearing melting points and averages of melting points from the five sources.

remained unchanged when a mixed melting point was taken. In the introduction to their report, the authors review the literature concerning acids with an odd number of carbon atoms reported since the pronouncement by Heintz. They point out that upon repetition of most of the work, careful fractionation of the reported acids resulted in the separation of acids with higher as well as lower melting points. Hence no confidence can be placed in the occurrence of heptadecylic acid in either animal or vegetable kingdom.

Boemer and Limprich found daturic acid to agree with synthetic heptadecylic acid in all its properties (17). Ruttan (18) also prepared heptadecylic acid artificially. In 1916 Jacobson and Holmes (19) obtained from alfalfa seed oil an acid which melted at 59.6° to 59.8°, and had a neutralization value of 207.5, hence corresponding with daturic acid of Meyer and Beer and the synthetic margaric acid of Krafft.

Lewkowitsch (20), therefore, considers the existence of daturic acid as proven.

Since then Dieterle in 1926 obtained from *Datura alba* an acid which, after fractional crystallization and precipitation, melted at 55–56° and which, in other respects corresponded with daturic acid (21). However, Heiduschka and Lüft (22) claim that the solid acid, from *Oenothera biennis*, which resembled the so-called daturic acid, could be resolved into palmitic acid and an acid with a higher number of carbon atoms. More recently Dieterle and co-workers (23) in an attempt at the better characterization of daturic acid, obtained from ergot, have prepared not only the magnesium salt and the methyl and ethyl esters but also the hydroxamic acid.

Such is the situation with reference to daturic acid. It is the more unsettled since Shriner, Fulton and Burks, Jr. (24) point out that the equimolecular mixture of palmitic and stearic acid may be mistaken for margaric acid and that mixed melting points are not conclusive evidence for identification.

## MELTING POINT.

The fatty acids are important chemical compounds and have been the subject of an almost endless number of investigations. It has been customary to determine the melting point for their characterization. So many melting points have been reported in the literature in many cases that the value of the property is greatly lessened. Because of the variation in melting points the writer has prepared curves of the melting points of fatty acids and their methyl esters.

The melting points of the fatty acids having an even number of carbon atoms (Curve I) are somewhat higher than those with an odd number (Curve II). The data, in the case of the methyl esters, are not as complete as those of the acids except in the lower esters. The melting points of the esters of acids having an even number of carbon atoms (Curve III) are also higher than those with an odd number (Curve IV). In both cases when the curves are plotted side by side they are nearly parallel, approaching or crossing at about thirty carbon atoms.

The melting point of daturic acid is generally reported as 59.9°, varying, however, from 54° to 60°. This point does not fall on the curve. According to the curve this melting point should be about 61°. The melting points of palmitic and stearic acids reported in the literature vary somewhat and several writers

report a melting point below the curve, but several also report a melting point which falls on the curve; namely, 64° and 71°, respectively.

The melting point of the methyl ester of daturic acid is reported as 29° to 30°. This point is slightly above the curve and probably should be nearer 28° unless that portion of the curve is plotted too low, due to lack of sufficient data. The melting point of the methyl ester of palmitic acid is reported as from 27° to 30° by several observers. The curve passes between these two points. The methyl ester of stearic acid is reported as from 38° to 40°. The curve also passes between these two points. Probably these melting points of the esters of palmitic and stearic acid reported are very nearly correct while that of daturic acid methyl ester is somewhat high. Round numbers have been used for the melting points of substances in this discussion for the purpose of illustrating the values of the curves.

## EXPERIMENTAL.

Ground seeds of *Datura Stramonium* purchased from S. B. Penick and Company were exhausted with 95 per cent alcohol. The alcohol was recovered by distilling under reduced pressure. The extracted material was shaken out with petroleum ether which was recovered leaving the fatty oil.

The oil was then saponified using a 10 per cent excess of KOH in 70 per cent alcohol. The alcohol having been recovered the non-saponifiable material was removed by means of ether. The non-saponifiable portion was studied by Gisvold (25) who reported that it contained sitosterol.

The liquid fatty acids were separated from the solid fatty acids by means of the Lead-Salt-Ether method (26). In this manner 1483 Gm. of solid fatty acids were obtained from 6550 Gm. of oil extracted from 35.4 Kg. of Stramonium seeds, representing 22.6 per cent of the oil used or 4.2 per cent of the seeds used.

Negative results were obtained in attempts to separate the solid fatty acids by fractional crystallization from alcohol, fractional precipitation of the magnesium salts, and vacuum distillation of the methyl esters.

## CONCLUSIONS.

The methods of separation referred to above are the ones formerly used and the negative results obtained point to the need of application of the studies in the identification of synthetic fatty acids by means of other derivatives such as were used by Reid (27) and his co-workers, Whitby (28) and others. The work of Francis, Piper and Malkin (29) in which they give the results of X-ray examinations of various fatty acids, synthetic and natural, could also be used with interest in the study of daturic acid, the identity of which is not yet firmly established in the minds of all investigators.

The writer wishes to express his appreciation to Professor Edward Kremers for his guidance in this work.

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# STUDIES ON BARBITURATES. XI. FURTHER CONTRIBUTIONS TO METHODS OF BARBITAL RESEARCH.*

BY CHARLES R. LINEGAR, JAMES M. DILLE AND THEODORE KOPPANYI.[1]

In a previous publication (1), we discussed different methods of extraction of barbiturates from urine, blood and tissues and also colorimetric methods for the estimation of barbiturates. From time to time we have received requests from other laboratories relative to certain difficulties encountered during the process of extraction of barbiturates, and although little difficulty is usually encountered in using the methods described in previous publications it was deemed advisable to improve this part of the procedure. This paper embodies the results of investigations devoted to the problem of the extraction of barbiturates.

## URINE.

*Methods of Clarification.*—Chloroform extracts of pathological and even normal urine specimens are sometimes highly colored with urochrome and other pigments.[2] These materials may interfere with the colorimetric readings as described in the quantitative procedure of Koppanyi, *et al.* (1). Ordinarily, if it is not necessary

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[2] The interfering colored residues found in the evaporated chloroform extract need not represent urinary pigment, but may be due to some colored impurities present in the chloroform. In order to prevent this, the chloroform used for extraction should be checked for such impurities by evaporating 100 to 200 cc. to dryness. If these impurities are present, the chloroform can be purified by distillation.

to concentrate the chloroform extract, colorimetric determinations may be carried out without removal of the pigments. However, in certain urines so much pigment is extracted that it is impossible to carry out colorimetric readings either directly or after concentration. Also, when the barbital content of the urine is very low and it is necessary to evaporate the extract to dryness, the amount of pigment which is taken up with the small amount of chloroform to carry out the test may be enough to prevent a satisfactory estimation of barbital and its derivatives.

Various procedures have been tried for clarifying highly colored urines before extraction with chloroform. The first requirement of any one of these methods is that it must not change the actual concentration of barbiturates in the urine, *i. e.*, precipitate, adsorb or destroy these compounds. Secondly, it must remove sufficient pigment so that the final color development is not obscured, and it should not yield end-products, such as acetic acid from lead acetate, which have a deterrent action on the subsequent color development.

Our methods of extraction of barbiturates from the urine described previously (1, 3) fulfil these requirements for ordinary purposes, and only highly concentrated urine samples show pigments with the alkaline copper sulphate precipitation method. We believe that the difficulties with this method arise largely from the fact that copper sulphate and sodium hydroxide are not used in sufficient amounts to produce a heavy precipitation of the mixture. The heavily precipitated urines yield little if any pigments. We have endeavored, however, to improve even upon this alkaline copper sulphate precipitation method and have experimented with a number of other methods in an attempt to more completely remove the pigments from the urine without destroying or removing the barbiturates.

In this investigation, sodium barbital was added to pathological, highly pigmented normal urine specimens, and urines which had been concentrated on a water-bath. These urines were cleared by one of the methods described below and aliquots of the filtrate extracted with ten volumes of chloroform, the chloroform extract filtered and evaporated to dryness. Control urines, *i. e.*, urines not cleared or urines cleared by other methods, were similarly treated in each case and the amount of the urinary pigment remaining in the evaporating dish after the evaporation of chloroform noted and compared. This residue was then dissolved in small volume of chloroform and the amount of barbital extracted was determined by the colorimetric procedure. Thus every method was checked not only as to its ability to remove pigment but also as to its efficiency in preserving the original barbital content of the urine.

The following new methods were used to clear the urine for the determination of barbiturates:

*A.* Sufficient amounts of *bichloride of mercury* are added to urines until heavy white precipitation occurs. The precipitate is filtered off and an aliquot of the filtrate extracted with chloroform. Although considerable pigment was removed by this method, it did not prove to be practical because large amounts of barbital were precipitated and probably destroyed by this method.

*B.* Enough *zinc sulphate* and *sodium hydroxide* is added to urines to produce heavy precipitation of zinc hydroxide. Although this method did not affect the barbital content of the urine, it was found to be rather ineffective in removing pigments.

*C.* Two grams of *sodium molybdate* are added to every 25 cc. of urine and sufficient *strong sulphuric acid* (20 to 30 per cent) to produce a heavy green precipitate. The precipitate is filtered off and the filtrate extracted, as usual, with chloroform. This method did not destroy the barbital added to the urine, and was found to be effective in removing pigments from certain concentrated urine specimens. However, it was inferior to the method finally chosen and described below.

*D.* Five cc. of a 10 per cent *copper sulphate* solution are added to 25 cc. of urine which is then made alkaline with 10 cc. of a 10 per cent *sodium tungstate* solution. After mixing thoroughly, the mixture is filtered and 5 cc. of 5 per cent *sulphuric acid* solution is added to 30 cc. of the filtrate. This is mixed, allowed to stand for about twenty minutes and again filtered. Twenty-five (25) cc. of this filtrate, which is equivalent to 13.39 cc. of the original urine, is extracted with chloroform. More pigment will be removed by this method if the amounts of reagents used for the 25 cc. of urine are doubled. This latter procedure has the disadvantage, however, of requiring a much longer time for filtration.

This method was compared with the original alkaline copper sulphate precipitation method and was found to be its equal in lightly colored urines. However, in highly colored urine specimens this method removed more pigment than any other method. No barbital was removed during this procedure.

*Extraction of Diethyl Barbituric Acid from Alkaline Urine.*—In a previous publication, we stressed the fact that urines or the cleared filtrates must be acidulated before extraction. This was a necessary precaution because the alkaline salts of barbituric acids are insoluble in chloroform. However, we observed repeatedly that alkaline urines not acidulated before extraction showed the presence of barbituric acids in the chloroform extracts. This led us to suspect that some of the excreted barbiturates are present as acids even in alkaline urines. A typical experiment demonstrating the above fact is described below:

*Dog:* Female, 11.4 Kg., given by femoral vein, 1650 mg. per Kg. of sodium barbital in divided doses with picrotoxin. Died 1 hour and 25 minutes after the last injection.

The urine excreted during this period was secured by catheterization of the bladder and its $p_H$ was found to be 7.5 by indicators.

Ten cc. of the urine was extracted directly without acidulation with ten volumes of chloroform. The colorimetric determination showed that the extract contained 0.4 mg. of barbital per cc.

Another 10 cc. of the same urine was acidulated with dilute sulphuric acid and extracted with ten volumes of chloroform. The colorimetric test showed in this case the presence of 0.6 mg. of barbital per cc. of the extract.

We endeavored to duplicate these results by adding various amounts of sodium barbital (an alkaline salt) to portions of alkaline rabbit and human urines which had a $p_H$ of 8.0 as determined by the use of indicators. Ten-cc. portions of each concentration were extracted directly, without acidulation with 100 cc. of chloroform and this chloroform was then tested for barbital. The results of one of these experiments on rabbit urine are summarized in Table I.

It can be seen that the amount of barbital recovered is inversely proportional to the amount of sodium barbital added to the urine. Sodium barbital added to

distilled water which was adjusted to $p_H$ 8.0 was not changed into barbital and the chloroform used to extract this solution gave negative tests for barbiturates throughout the experiment.

TABLE I.—THE EXTRACTION OF BARBITAL FROM ALKALINE RABBIT URINE ($p_H$ 8.0) TO WHICH VARYING AMOUNTS OF SODIUM BARBITAL HAVE BEEN ADDED.

| Amount of Sodium Barbital Added to Urine. Mg. per Cc. | Amount Recovered as Barbital. Mg. per Cc. | Percentage Conversion of Sodium Barbital to Barbital. Per Cent. |
|---|---|---|
| 0.5 | 0.25 | 50 |
| 1.0 | 0.50 | 50 |
| 2.0 | 0.80 | 40 |
| 3.0 | 1.20 | 40 |
| 5.0 | 1.50 | 30 |
| 10.0 | 2.50 | 25 |
| 10.0* | Negative | 0 |

* Dissolved in distilled water, $p_H$ 8.0.

## BLOOD.

The modified Folin-Wu method for blood precipitation gives such uniform results and clear extracts that no further improvements are deemed necessary. However, we have never extracted volumes of blood larger than 20 to 30 cc. and thus have not tested the pigment removing capacity of the Folin-Wu method for large amounts of blood. Two hundred cc. of freshly drawn oxalated dog blood were precipitated by adding 200 cc. of 10 per cent sodium tungstate and 400 cc. of $^2/_3$ normal sulphuric acid solutions. The filtrate (485 cc.) was evaporated on a water-bath until it reached a volume of 75 cc. and was then extracted with ten volumes of chloroform. This chloroform extract evaporated to dryness showed no pigments.

Incidentally we endeavored to check the specificity of our barium hydroxide and lithium hydroxide tests on this evaporated extract.[1] The evaporated residue of the total blood extract was taken up in 10 cc. of chloroform and tested colorimetrically. Negative results in all three ranges of the micro (lithium hydroxide) and in the first range of the macro (barium hydroxide) tests were noted.

## TISSUES.

The alkaline copper sulphate precipitation method and the liquid air method described previously (1) suffice for the study of the barbital concentration of organs. We want to emphasize again, however, that with the alkaline copper sulphate precipitation method the best results are obtained if the proportions of copper sulphate and sodium hydroxide solutions are such as to change the liquefied tissues to a heavy, massive, semi-solid mixture.

The liquid air method, as emphasized elsewhere (1), gives the best yield of barbiturates. However, this method cannot be applied to the extraction of barbiturates from the central nervous system, because as already observed (2) the

[1] The colorimetric test for barbiturates cannot be carried out in ether. The addition of the reagents to an ether extract produces dirty precipitates of miscellaneous hues but no clear cut blue colors. Therefore, if ether is used as the extractive medium, it must be evaporated off and the residue taken up in chloroform for testing.

lecithins and cephalins of the central nervous system are easily soluble in chloroform and interfere with the development of color in the test for barbiturates.

Recently, we found a simple method which allowed us to estimate the barbiturate content of the brain by using the liquid air method. Brain tissue is frozen in liquid air and pulverized. This powdered brain tissue is shaken with chloroform, the chloroform extract is filtered and evaporated to dryness on a water-bath, and the residue taken up again in a small volume of chloroform to which acetone is added drop by drop. A heavy precipitation of phospholipids occurs in the solution. The precipitate is filtered off and acetone is added again to the filtrate to ascertain whether the phospholipids have been completely removed. The solution in which no more precipitation occurs with acetone is again evaporated to dryness, and the residue taken up with chloroform and tested. In properly treated extracts, the test can be carried out without interference.

## DISCUSSION.

The additional methods described for the clarification of urine will probably be useful to those who are working with pathological or highly concentrated urines. It is recommended that before discarding a urine sample as unsuitable for colorimetric estimation of barbiturates all three methods for clarification, namely, the copper sulphate, the sodium molybdate, and the copper sulphate-sodium tungstate methods, should be tried. There will be very few urines, indeed, which when appropriately cleared could not be used for the quantitative estimation of barbiturates.

We have shown that the urine has the capacity even at a relatively high $p_H$ of converting sodium barbital into the acid form. The amount of sodium barbital added to alkaline urines and recovered as diethyl barbituric acid is inversely proportional to the amount originally added. It is evident that there is a buffering action of the urine which changes a portion of sodium barbital to barbital, thus making it available for extraction with chloroform. This buffering power of the urine is almost constant since the percentage of barbital formed from the alkaline salt decreases as the amount of added sodium barbital increases. This characteristic of the urine has not been previously observed as far as barbiturates are concerned, but we have described the same phenomenon concerning the blood (3). We conclude, therefore that both blood and urine have the capacity to convert sodium barbital into barbital.

We have shown that even large amounts of blood can be extracted with chloroform without the slightest trace of pigments in the extract. We have also shown that even such large volumes of blood, if the extract is evaporated to dryness and then taken up in a very small volume of chloroform, contain no substance which reacts in our macro or micro tests to give a blue color. These tests, therefore, can be safely used in the diagnosis of barbiturate poisonings.

The liquid air extraction method for other tissues is now extended to the brain, if the phospholipids are removed with acetone. This not only provides a very convenient and rapid method for the extraction of barbiturates from the central nervous system, but also shows that our assumption expressed in the previous communication (2) that lecithins interfere with the colorimetric estimation of barbital, was correct.

SUMMARY.

1. Two practical methods of clearing highly colored urines for the purpose of quantitative estimations of barbiturates are described.

2. The urine has a limited buffering capacity manifested in the conversion of sodium barbital into the acid form even in alkaline urines. The amount of barbital so converted is inversely proportional to the amount of sodium barbital originally added to the urine.

3. Large volumes of blood (after Folin-Wu precipitation) may be extracted with chloroform without obtaining interfering materials in the chloroform extract even after concentration.

4. The liquid air method of direct extraction of barbiturates can now be applied to the central nervous system after removing the phospholipids from the chloroform extract with acetone.

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# A PLAN FOR PHARMACY INTERNSHIPS AT THE UNIVERSITY OF MICHIGAN HOSPITALS.*

BY HARVEY A. K. WHITNEY[1] AND E. C. WATTS.[2]

Pharmacy as a profession is unquestionably suffering influences that are tending toward pronounced changes. It will not be argued here that pharmacy is or is not wholly conscious of the drift. Certain it is, however, that the authors feel their incapability of intelligent argument or prediction.

Since words have been spoken and written it has been charged that many things are wrong with pharmacy. It has been said that the profession requires fewer and better pharmacists, fewer and better pharmacies and fewer and better schools of instruction. Professional mediocrity does exist within the rank and file of pharmacists and likewise professional morals and business standards are frequently unobserved. This condition reflects to the disadvantage of the public and the physician. Others have claimed that colleges of pharmacy should not and cannot be required to turn out a finished professional and business product. This reflects to the disadvantage of the pharmacist. For comparison it is argued that medical men do not expect such finished products to be graduated from medical schools. However, there are those in the medical profession who recognize this deficiency and consequently make some provision toward a remedy. One needs only mention the general requirement of service as intern before the graduate physician is licensed to practice medicine. It is because the authors sense the same deficiency in pharmacy that the outline of service that follows is proposed for our hospital group.

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* Section on Practical Pharmacy and Dispensing, A. PH. A., Portland meeting, 1935.

[1] Chief Pharmacist.

[2] Assistant Chief Pharmacist.

A competent and well-organized pharmacy is an essential part of every large modern hospital. In operation it becomes necessary that the hospital pharmacy properly appreciate its duties and privileges in the matter of pharmaceutical and medical education. Medical education, yes, for pharmacy still remains a branch of the practice of medicine. Moreover, and especially if a unit of an important teaching institution, the rôle of the hospital pharmacy attains a superior position in such endeavors. It is therefore the further purpose of this plan to provide at once for the hospital pharmacy as an efficiently functioning service unit and an educational unit for training such graduates in pharmacy as may be interested in postgraduate practical and professional services. Some experience with this proposed plan has been had in the past through the unannounced policy of engaging for duty only recent graduates of the University College of Pharmacy. These individuals have been appointed after being encouraged to believe it would be possible to gain considerable valuable experience. Generally successful efforts have resulted from the subsequent attempts to find permanent places for such experienced "interns."

It is therefore proposed that the personnel of the Hospital Pharmacy be constituted and appointed in accordance with the following scheme:

| A. | Permanent (Staff) Employees. | No. |
|---|---|---|
| 1. | Chief Pharmacist | 1 |
| 2. | Assistant Chief Pharmacist | 1 |
| 3. | Pharmacist-Secretary | 1 |

| B. | Temporary (Term) Employees. | No. |
|---|---|---|
| 1. | Pharmacist, Master Grade | 2 |
| 2. | Pharmacist, Senior Grade | 2 |
| 3. | Pharmacist, Junior Grade | 2 |
| 4. | Pharmacy Assistants, nonregistered | 0 |

It may be taken for granted that the functions and duties of the permanent employees will be well understood. It is anticipated the term employees will be selected from a list of approved applicants. An approved applicant is defined as a recent graduate of one of the member schools of the American Association of Colleges of Pharmacy. It may be further understood that applicants from the University of Michigan will be shown first favor. Such an applicant when accepted will receive an appointment as Junior Grade Pharmacist, enduring for one year. If this probationary period is successfully passed the candidate will be reappointed for a second year as Senior Grade Pharmacist. At the completion of the internship, he may, if he so desires, apply for the third year of postgraduate instruction leading to the award of Master Hospital Pharmacist. It is anticipated further that candidates receiving the certificate of Master Hospital Pharmacist will merit the respect of the entire staff of the University Hospital and that this institution will offer all possible help, that he may put to practical use the information and experience acquired during his residence.

The experiences and services offered to the pharmacy intern will be of that order peculiar to the hospital pharmacy and representative of the highest order of professional practices. Since the hospital pharmacy in fact and influence reaches into practically every department of the hospital it is a matter of considerable concern that this department's operative skill and "end-products" be flawless and faultless. In many instances the responsibility centered in the chief pharmacist will of necessity be divided to some degree among the junior staff members, generally in extent compatible with their grade. The major departmental work

is divisible by the number of grades in the term group and is separable into particular endeavors for rotating service. Such segregations may include, for example: magistral pharmacy; galenical and official preparations; colloidal, isotonic and parenteral solutions; and analytical and control work. Particular attention is also given to bacteriological procedures, sterilizing processes, hydrogen-ion concentration, laboratory reagents and solutions, surgical dressings and preparations and the modern materia medica (including clinical evaluations of experimental material).

Further, since it is the prescription that unites the pharmacist and the physician in the medical arts, particular stress is laid upon the interpretation of such orders. Prescriptions may be properly interpreted upon the basis of intent, bringing into consideration all known facts pertinent or relating to the drug and the patient. It is further contemplated that service will include a directed program of extramural work. Such efforts, essays, reports and reviews will be regularly presented to all members of the staff in regular meetings. Material regarded, by the staff, as of importance to the other departments of the hospital will be submitted thereto for disposition.

It necessarily follows that the adoption of such a plan should also include a definite schedule of remuneration for the individual. It is obvious, despite the attractiveness of the type of work, the graduate student will regard such employment as competitive, and to meet the competitive phase and to maintain the attractiveness of the offer provides no small problem. It is quite generally agreed, to attract graduates of a higher order, that current professional wage scales will have to be paid. In this respect comparisons with medical internships offer a severe change.

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## A CHEMICAL STUDY OF SULPHUR OINTMENT.

BY LEWIS C. BRITT.*

The industrial, biological and medicinal importance of sulphur have made its quantitative determination a common laboratory procedure. Sulphur has been used as a remedial agent since antiquity and still enjoys popular recognition. Notwithstanding the medicinal importance, little attention seems to have been given to the quantitative determination of sulphur when combined with a fatty base.

Among samples submitted for analysis at the Oregon Board of Pharmacy Drug Laboratory were several of sulphur ointment. These samples were obtained through counter purchases (not prescriptions) made by inspectors in drug stores, which were variously located in the state. A survey of the literature revealed no satisfactory method for a gravimetric determination of sulphur in this preparation. Elsdon (1) has recommended the oxidation of the sulphur to sulphur trioxide by a mixture of bromine and nitric acid, removal of the fat from the resulting mixture by ether extraction, and a gravimetric determination of the sulphur trioxide in the aqueous solution by barium chloride precipitation. The details for conducting the method and data for known samples were not given. The

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method was said to give satisfactory results but the reader is not informed as to the significance of this statement. An attempt to determine the accuracy of the method was abandoned due to inability to control the offensive and dangerous bromine vapors.

Volumetric methods for the determination of sulphur in organic combination and mixtures are more numerous. Upton (2), Castiglioni (3) and Allport (4) have suggested volumetric methods and since the completion of this study Fleck and Ward (5) have suggested yet another.

The following method has been found to give dependable results for the determination of sulphur in sulphur ointment:

> Treat about one Gm. of the well-mixed and accurately weighed ointment with 50 cc. of 10 per cent potassium hydroxide solution, boil gently until the lard is saponified and the sulphur converted to soluble sulphides (usually about one-half hour). Add 50 cc. of solution of hydrogen peroxide and digest slightly below the boiling point for thirty minutes, make slightly acid with hydrochloric acid free of sulphur trioxide, heat to boiling, cool, filter and wash the vessel used in the saponification and the filter paper with distilled water. Determine the sulphur trioxide in the filtrate by barium chloride precipitation in the usual way. Correct the resulting weight of barium sulphate by a blank run on the solutions of hydrogen peroxide and potassium hydroxide and multiply the final weight of barium sulphate by 0.1373 to obtain the equivalent weight of sulphur.

After the oxidized solution has been made acid it must be heated to boiling to drive the fatty acids to the surface of the liquid and then thoroughly cooled to allow them to solidify, so they may be removed by filtration. If the fatty acids are allowed to enter the filtrate they will form insoluble barium salts which will cause the result of the analysis to run high.

A blank must be conducted to determine the sulphur trioxide in the alkali and peroxide solutions. If the method is run frequently, considerable time may be saved by standardizing the reagents in quantity and omitting the blank with each sample. The possibility that lard should be included in the blank was suggested and tests were run to ascertain the possibility of error from this source. The samples of benzoinated lard (U. S. P.) examined were found to average 0.0002 Gm. of barium sulphate per Gm. of lard, equivalent to 0.0000275 Gm. of sulphur. This amount is considered negligible and it is not thought to be necessary to include lard in the blank.

The accuracy of the method was determined from analyses conducted on sulphur ointments of known strength. The sulphur used in these preparations assayed 99.576 per cent pure by the U. S. P. X method. The efficiency of the method may be judged by the results in Table I.

Satisfactory results were also obtained with the method by students who ran an analysis of sulphur ointment as a laboratory experiment in courses in drug analysis.

### EXAMINATION OF COMMERCIAL OINTMENTS.

A total of thirteen samples of sulphur ointment, collected by drug inspectors from various stores in Oregon, have been examined. With the exception of two, all samples were prepared extemporaneously in the stores. Only three of the samples were found to contain from 14.5 to 15.5 per cent sulphur by weight in benzoinated lard, which were considered to be U. S. P. requirements. In the remaining samples

the amount of sulphur was found to vary from 13.0 to 22.467 per cent by weight and six of these were made with petrolatum base.

TABLE I.

| Sample No. | Wt. of Sample. | Per Cent Sulphur Added. | Per Cent Sulphur Found. | Difference. |
|---|---|---|---|---|
| 1 | 1.6076 | 7.673 | 7.666 | 0.007 |
| 1 | 1.8044 | 7.673 | 7.763 | 0.090 |
| 2 | 1.6741 | 8.916 | 8.921 | 0.005 |
| 2 | 1.7561 | 8.916 | 9.029 | 0.113 |
| 2 | 0.8499 | 8.916 | 8.918 | 0.002 |
| 3 | 0.7670 | 14.489 | 14.491 | 0.002 |
| 3 | 1.1902 | 14.489 | 15.505 | 0.016 |
| 3 | 0.7748 | 14.489 | 14.628 | 0.139 |
| 4 | 1.0785 | 16.348 | 16.446 | 0.098 |
| 4 | 1.0511 | 16.348 | 16.350 | 0.002 |
| 4 | 0.9964 | 16.348 | 16.366 | 0.018 |

## CONCLUSIONS.

1. A workable method, suitable for the gravimetric determination of sulphur ointment, has been devised.

2. The number of samples of sulphur ointment examined indicates a tendency on the part of retail pharmacists to substitute petrolatum for benzoinated lard, as 46 per cent of those examined were made with petrolatum base.

3. If the ointment requires petrolatum or wax to render it stable, their effect on the therapeutic value of the preparation should be determined, to allow for their addition if possible.

4. A study of the stability of the official ointment and ointments prepared with varying amounts of petrolatum and wax would be of interest.

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# MEDICINE DROPPER TO DELIVER ONE MINIM (APOTHECARY'S MEASURE) PER DROP.*

BY R. A. KONNERTH, R. E. SCHOETZOW AND F. W. NITARDY.[1]

In prescribing potent galenicals such as Tincture of Digitalis, the physician frequently refers to drops when directing dosage. This practice subjects the dose actually administered to wide variations which depend upon the size and shape of countless varieties of droppers on the market.

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* Section on Practical Pharmacy and Dispensing, A. PH. A., Portland meeting, 1935.

[1] Chemical and Pharmaceutical Laboratories, E. R. Squibb & Sons, Brooklyn, New York.

In designing a dropper which will deliver one minim per drop as nearly as possible, the factors which govern the formation and size of drops must be considered.

The maximum volume of a drop of a given liquid which can form is dependent upon the surface tension of the liquid and its specific gravity. Such a maximum drop can form only when a flat surface of sufficient area is available.

The surface tension of hydro-alcoholic mixtures (as used in the preparation of Tincture of Digitalis) is such that at room temperature (25° C.) the maximum drop is just less than one minim. A dropper, which will yield this maximum drop of such a hydro-alcoholic solution, has been designed. It consists of a straight glass tube 8 cm. in length and having an internal diameter of 3.8 mm. One end is attached to a rubber bulb, while the other end is formed into a flange as shown in Fig. 1.

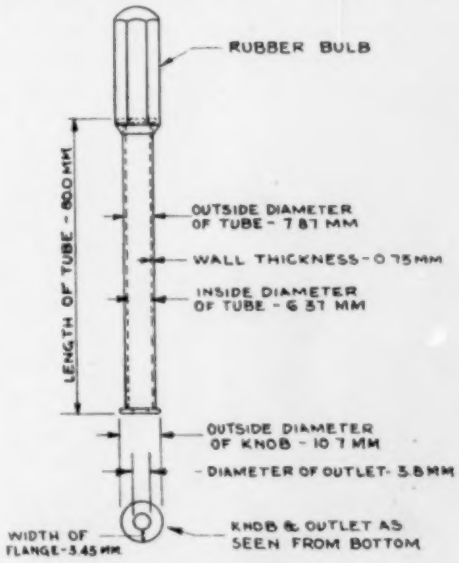
RUBBER BULB
LENGTH OF TUBE - 80.0 MM
OUTSIDE DIAMETER OF TUBE - 7.87 MM
WALL THICKNESS - 0.75 MM
INSIDE DIAMETER OF TUBE - 6.37 MM
OUTSIDE DIAMETER OF KNOB - 10.7 MM
DIAMETER OF OUTLET - 3.8 MM
WIDTH OF FLANGE - 3.45 MM
KNOB & OUTLET AS SEEN FROM BOTTOM

Fig. 1.

Slight modification in the dimensions of the dropping flange will furnish a dropper suitable for minim per drop delivery of other liquids.

For Tincture of Digitalis the diameter of the dropping surface is 10.7 mm. and the delivery end of the tube is constricted leaving an orifice of 3.8 mm. to prevent leakage and increase accuracy. In order to obtain the maximum drop this dropper must be held in a vertical position and the drops expelled slowly from the full tube.

The accuracy of this dropper is shown by the following results obtained using Tincture of Digitalis at 25° C. in thirty-five samples of the droppers selected at random from stock.

| Minims per Drop. | Number of Droppers Delivering This Amount. |
|---|---|
| 0.990–0.995 | 5 |
| 0.970–0.989 | 3 |
| 0.950–0.969 | 12 |
| 0.930–0.949 | 10 |
| 0.910–0.929 | 3 |
| Less than 0.910 | 2 |

The largest volume delivered was 0.995 minims per drop, while the least was 0.901 minims per drop.

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**Prof. Harold Urey,** discoverer of heavy water and Nobel Prize winner, has been awarded the Ernest Kempton Adams Research Fellowship in chemistry for 1935–1936, Columbia University announced October 10th. The announcement said Prof. Urey would be enabled to enter a new field of research.

A portrait of the late **Prof. Charles F. Chandler**—one of the founders of the American Chemical Society and member of the AMERICAN PHARMACEUTICAL ASSOCIATION from 1867 until his demise in 1925—was presented to Columbia University.

# DAVID HENSHAW—FROM "DRUGGIST" TO SECRETARY OF THE NAVY.*,[1]

BY GEORGE E. ÉWE.

A record of the life activities of a man who started out as a "druggist" and later rose to the highest political office ever attained by an erstwhile member of the drug business, as far as known, should prove of interest to pharmacists in general and be worthy of retention in the archives of the profession.

While David Henshaw is most generally put down as politician, promoter and author, his five years of apprenticeship followed by about thirteen years of joint proprietorship in the drug business, with which he started his business life, places him definitely as one of the drug calling.

David Henshaw was a descendant of Joshua Henshaw of Lancashire, England, who settled in Dorchester, Mass., in about 1653. Henshaw's ancestors later moved to Leicester, Mass., and were among the original proprietors of the town. His father was a patriot of the Revolution and a highly respected magistrate.

DAVID HENSHAW

David Henshaw was born on April 2, 1795, in Leicester, Mass., the fifth son of David and Mary (Sargent) Henshaw. He was related to Artemus Ward, Commander-in-Chief of the Massachusetts forces during the Revolutionary War, who was in nominal command at the battle of Bunker Hill. Henshaw spent his boyhood days on his father's farm attending, during this time, the free schools and academy of his native town.

At sixteen years of age he became druggist's apprentice with the firm of Dix and Brinley who carried on a "drug, paint and dye-stuffs" business located in the old Faneuil Hall Building in Boston, Mass.

"On coming of age, although his employers were desirous of still retaining his services, yet they were unwilling to offer him more than 1/8 of the business profits. They, as many Boston firms both before and since, made a mistake. The smart, enterprising and self-reliant young man thought he could do better, and he did. He determined to be his own master and without a dollar of capital set up for himself. Hiring, at a cheap rent, the store opposite the old State House in State Street (Boston), lately occupied as the office of the 'Boston Daily Advertiser,' he filled it up, but, with the exception of a barrel or two of ochre and possibly a few bottles, etc., he had no stock to put in. His old employer, Mr. Brinley, often called as he was passing to his own store under Faneuil Hall, ostensibly to see how 'David,' as he always called him, got along. His invariable salutation was 'Well, David, how's business?' David could not, with truth, say it

* Section on Historical Pharmacy, Portland meeting, 1935.

[1] Research Laboratories, Tailby-Nason Company, Boston, Mass.

was good, as he had nothing to do business with, but the young man had not, in the meantime, been idle. He knew.....that most of their (his old firm's) goods came from the old house of David Taylor and Son, London. He had written them, stating all the circumstances of the case and at the same time enclosing a list of articles that he wanted, and promised, if they were sent to him, to remit the pay within a certain time. As there were no ocean steamers or telegraphic means of communication then, it took a long time for an answer, but it came at last in the shape of an ample stock for the long empty shelves. Old Mr. Brinley, during all this long time, had been constant in his calling on young David, possibly hoping that the valuable apprentice might be glad to go back to his old place again. But young David, though always honest, was sharp and far-seeing—he had kept his business with Taylor and Sons to himself. Last of all he would have mentioned the matter to his old employer, who opened his eyes very wide with surprise one fine morning on beholding the almost magical change in David's amount and variety of stock."[1]

Henshaw's business prospered mightily under his vigorous policies and seriously cut into the business of his former employers. In 1814, he allied himself with one David Rice, an expert paint man and glazier, as "Rice and Henshaw" and located in new quarters at 33 India Street (Boston). The business proved very successful and was further expanded. John Henshaw, a younger brother of David Henshaw, was admitted and the name of the firm was changed to "Rice, Henshaw and Co." Upon the retirement of Mr. Rice in 1825, Chas. Henshaw, an older brother, was admitted as partner and the firm's name was again changed—this time to "David and John Henshaw and Co."

Henshaw's firm also had a chemical works at South Boston and the following incident in connection with these works, taken from the aforesaid newspaper clipping seems worthy of recounting:

"The Messrs. Perkins receiving a large quantity of crude camphor which came on the deck of one of their ships from the East Indies, wanted Mr. Henshaw to buy it at 37¢ per lb. It came to $45,000.00, quite a large amount of money for those days of comparatively small transactions. 'Mr. Perkins,' said Mr. Henshaw, 'we will take the camphor, if you can see your way clear to accept the note of our firm—we can give you nothing else.' 'Perfectly satisfactory,' replied Mr. Perkins. This camphor was probably a safe purchase in any event, but it proved to be a very profitable investment. It was taken to their chemical works at South Boston, which, as they were largely engaged in the manufacture of spirits of turpentine, were, a part of them, burnt up on an average once a year and refined. Soon after the cholera first made its appearance in this country, and the people having got it in their heads that camphor was a good thing to ward off its attack, their great stock of it was soon all gone at $2.50 per pound."

But while the drug business was very profitable and successful it did not claim all of Henshaw's time and energies and he was interested in other ventures. He gave up the drug business in 1829 after about thirteen years of operation, presumably because of the pressure of his other activities.

Before he was 23 he had become a banker and had established an insurance company. By 1828 he had actively furthered a project for a railroad through the Berkshires to Albany, New York. Later, he became an incorporator of the "Western Railroad," which, with the "Boston and Worcester" of which he was also a director, completed the interstate line to Albany.

Henshaw possessed a keen knowledge of men and affairs, read much and was a vigorous author. He made frequent contributions to the *Boston Post* and other

[1] From a newspaper clipping of unknown date or origin kindly furnished by Miss Mabel W. Henshaw, Cambridge, Mass. Incidentally, this clipping affords many other anecdotes illustrating the humanness, liberality and sagacity of David Henshaw.

periodicals and wrote the important "Letters on the Internal Improvement and Commerce of the West."

In 1821, he and his associates established the *Boston Statesman* which opposed John Quincy Adams for president, but Henshaw later made terms with President Adams and gained election from Suffolk County to the Massachusetts State Senate in 1826 on President Adams' party ticket. Henshaw waged an active political life covering local, state and national affairs and became in turn Collector of the Port of Boston, Democratic "boss" of Massachusetts, State Legislator and Secretary of the Navy under President Tyler.

He was appointed Collector of the Port of Boston in 1829 by President Jackson and held this office for nine years to the acceptance of all who had occasion to do business with that department. He had great practical experience with high executive ability and brought these successfully to bear upon the orderly and systematic management of the affairs of this office.

His Navy Secretaryship dated from July 23, 1843 to Feb. 19, 1844, when the Senate rejected his appointment in deference to Webster and other Whigs. But he had charge of it long enough to evince eminent talents and qualifications for the place. While Secretary he introduced a system of strict accountability for funds and materials of the department far beyond previous custom and also advocated the annexation of Texas as preliminary to the acquisition of California.

Henshaw's democracy was conservative. He was a capitalist, a Mason, an opponent of prohibition, a friend of slaveholders. A political rival characterized him as "a shrewd, selfish, strong-minded (but I believe corrupt-hearted) man" who directed his party "with a rod of iron" and would "see it damned ere others should."

Henshaw's will to rule was unmistakable, but there is little reason for questioning the sincerity of his convictions. "An ardent politician of the Jeffersonian school and true to its principles as the needle to the pole" (from inscription on Henshaw's tombstone). Incidentally, an inspection of this tombstone disclosed that it is inscribed with an extensive account of Henshaw's activities embracing a total of 232 words. He was a self-made man who achieved for himself wealth, political influence and power and an unquestioned reputation for mental vigor and energy of purpose, of no ordinary character. While the innate qualities of David Henshaw presaged success in the enterprises in which he engaged, one is disposed to feel that the studiousness, diplomacy, knowledge of people and organizing ability inculcated by his fairly extensive experience in the "drug" business materially aided in the attainment of this success.

Although he never married he dispensed a generous hospitality at his country home in Leicester, Mass. Henshaw died on Nov. 11, 1852. Mr. D. H. McKenna, Town Clerk of Leicester, Mass., states in a personal communication:

> "I am told his (Henshaw's) body is interred in 'Pine Grove Cemetery,' Pine Street, Leicester, in, presumably, the first cast-iron casket in New England. About 1912 the old homestead (Henshaw's) was connected with our public water supply. In course of the work excavating for that purpose, several old cannon balls were unearthed..... these relics are now in possession of William Montgomery who occupies the house at the present time."

In explanation of the finding of these cannon balls it may be of interest to note that in Henshaw's childhood a fort was situated directly opposite the Henshaw homestead and Henshaw, as a boy, was often lodged in the fort over night for pro-

tection from marauding Indians. However, a pilgrimage to the Henshaw homestead disclosed that no relics of Henshaw are on deposit there, apparently the only relics extant being an oil painting and a tinted tintype of Henshaw in the possession of Miss Mabel W. Henshaw, Cambridge, Mass. Incidentally, these are the only likenesses of David Henshaw encountered in this study.

Henshaw's homestead, now much reduced in spaciousness, by demolition of various sections, to suit the needs of the present day, is located in Henshaw Park, Leicester, Mass., and is the oldest house in the town.

Acknowledgment is due Miss Mary D. Thurston, of Leicester, Mass., whose line of forebears was the same as that of David Henshaw, for contributions to the data embodied in this account.

The references listed herewith afford voluminous data which will be appreciated by the especially interested. Many anecdotes suitable for pharmaceutical eyes are also to be found among these references. But space-saving dictates the omission of these anecdotes, which are of the type utilized above in this account to illustrate the remarkable abilities and character of David Henshaw who made the "drug" business one of the stepping-stones to the high office of Secretary of the Navy.

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## HOW TO HELP THE PHARMACIST COMMERCIALLY.*

BY E. C. BROKMEYER.

It is so self-evident that the pharmacist must be qualified professionally to succeed that further comment as to this is unnecessary.

If the American people appreciated and supported professional pharmacy to the same extent that the English people do, there would be no place on the program of this convention for the presentation of a paper on the subject of "How to Help the Pharmacist Commercially." Whether wisely or not, the American people have seen fit to develop the American drug store along commercial rather than professional lines. It is true that here and there pharmacists have scored distinct successes in the conduct of strictly professional or ethical pharmacies, but unfortunately they are the exceptions rather than the rule.

When the writer of this paper discusses "How to Help the Pharmacist Commercially" it must not be understood that he in the least fails to appraise professional pharmacy at its true and proper value—the highest. The profession of pharmacy

* Section on Educatian and Legislation, A. Ph. A., Portland meeting, 1935.

is and must continue to be equal in importance with all other professions, including medicine and law. Its relationship and responsibility to the public are equally important and serious. The only justification for a paper on "How to Help the Pharmacist Commercially" is the fact that as conditions confront the American druggist to-day his problem is to become solvent in thousands of cases and to remain so. This is no less a serious problem for the American people, but unfortunately they either do not know it or, if they do, they are in the main indifferent.

The pharmacist may be helped commercially in a number of ways. Under the National Industrial Recovery Act, NRA encouraged the adoption of scientific cost accounting methods where not used and where impossible. Unfortunately the average pharmacist does not have the necessary capital to enjoy the benefit of such methods by engaging qualified accountants, but nevertheless he may call in a qualified accountant and have him place his books and accounts and system of conducting his business in proper order and from time to time check up his store. A pharmacist at all times should know accurately his cost of doing business, including every factor that enters into its determination, in order to ascertain the price at which he must sell his merchandise and his service so as to net him a reasonable profit on his investment, including his professional training.

A pharmacist may be helped commercially by emulating as far as possible the example of the modern enterprising and progressive chain and department stores. Although the limited capital of the average pharmacist is a serious handicap, the fact remains that he can improve the appearance of his store and his display windows and make more of an appeal to the public. He will lose nothing by going out of his way to be accommodating and see that his clerks are. He must inspire confidence in his patrons. He must note fast- and slow-moving merchandise and govern himself accordingly in handling it. He should cultivate his patrons as much as possible, both in person and occasionally by mail, if not by local advertising, including the radio. The pharmacist should above all things exercise extraordinary care in compounding physicians' prescriptions and take pains to see that his registered clerk does. There should be no shortage or excess in the quantities of the ingredients prescribed. A preparation compounded upon a physician's prescription should be neither adulterated nor misbranded under the law. The pharmacist will help himself commercially by exercising extraordinary care in compounding prescriptions and getting the benefit of a reputation for doing this.

A pharmacist can help himself commercially and his fellow pharmacists by resorting to fair trade practices at all times and under all conditions, however trying. The National Industrial Recovery Act failed of successful administration because of the lack of full and proper coöperation on the part of many units in the industries and professions in observing the rules adopted by them and approved by NRA.

Finally, the pharmacist may be helped commercially by legislation and honest and efficient administration of the laws needed for his protection against unfair competition. To obtain these needed laws and proper enforcement pharmacists must be organized into forceful and intelligently directed city, state and national associations. This is not enough—pharmacists must sell their profession and their business to the public. Until they do they cannot reasonably expect the laws needed to protect them against unfair competition, which in most cases means destructive competition.

# THE PHARMACIST STUDIES LAW.*

BY CHARLES G. AJAX.

As students, we learned that pharmacy is an ever-unfolding science, that we can conceive of no cessation in the study of the laws of nature. And that necessity captured our imagination. We looked forward to practicing our profession; at the same time, as initiates into the mysteries of nature, we understood that there could be no formula in a compromise with truth.

It soon became evident that in the economy of pharmacy other laws were involved which, in accordance with social phenomena, are likewise in a continuous state of evolution—a biological interpretation of law, as it were. These are trade regulations which, in accord with the common practice of the biological science, reach a balance or equilibrium at times in the whim of the consumer—and man is satisfied—for the time being. It is thus apparent that these laws are in constant flux. While the law of supply and demand remains unalterable, its varying manifestations bring new problems to us daily in the interest of *fair play*.

And now, if we are to keep up with the procession, another type of law must be studied. We must understand so-called Constitutional Law. The American system of law-making is a thing, fearfully and wonderfully built. From the village constable up to the nation's President, from Congress at Washington down to the Council of Podunk, each unit of legislative or judicial authority is hedged with perplexing limitations. Our government has been called a system of checks and balances. Our bewildered brains whisper: "Ah, yes, plenty of checks. . . .a check on every forward-looking effort. But nothing is balanced."

When a mariner is adrift in a stormy night his fears are calmed by study of the charts, which his good judgment planned during fair weather. May I question if, in the darkness and stress of to-day, we have a compass and chart for guidance? Let us look at fundamental law and ascertain.

The most basic factor to comprehend is that the constitutionality of law is not a subject for exact laboratory technique. It has less exactness than our laboratory sciences, for it is purely a human means—so liable to fallibility since social values are personal. Were each of us in this room handed a specimen of an unknown substance to determine whether it was acid, alkali or neutral, an identical laboratory report would be obtained from all. Not so with jurisprudence, whether it be a law of Congress, or of city council. A body of attorneys, handed a new mandate for legal analysis, might submit multitudinous interpretations. But the large majority will respond in a manner well calculated to preserve dignity in the final verdict of the Supreme Court. Regardless of that decision, most of these will have been so ambiguously phrased that each may proudly announce: "I told you so!"

I have no quarrel with juridical science, since our very system of government makes this state of affairs inevitable. Nevertheless, when we pharmacists see lawyers and judges forever in disagreement, when we perceive respected experts on either side of every question, *failing to take cognizance of social justice*, may we not feel justified in analyzing for ourselves in the molding force of legal progress?

The question has more than academic interest. It is not my purpose to amuse you with aimless reflections on our system of law-making. There are certain defi-

* Section on Commercial Interests, A. PH. A., Portland meeting, 1935.

nite principles which we must remember in order to better our condition by means of new legislation or by application of existing laws. Otherwise, our efforts may be wasted, for time spent in chasing rainbows is opportunity lost.

All power to make regulations for government lies in the people themselves, except such rights as the people have yielded in reconciliation of conflict. Much power has been delegated; yet far more has been retained than generally believed. The use of extraordinary powers by Congress during war time has led us to forget that Congress, after all, is a body of definitely limited authority. *Congress has only such power as the people have given it.* All the rest of the original power—call it what you will, natural, or divine—still resides in the people. This control the people have entrusted to the legislatures of their states; and within certain clearly defined limitations, the legislature is the voice of the people. Congress is not.

Too long has the national constitution been regarded as a God-given Mosaic law. It can serve the individual only by permitting *free* research in our local legislative laboratories. Only in this way can we realize that this country belongs to the living, that the dead have no power over it. By respecting the will of the state our national constitution will have fuller moral force and support.

Of what practical use to the pharmacist is this fundamental principle? Simply this: let us not, in our zeal for national legislation to correct existing evils, overlook the fact that the legislature of each state has at hand numerous methods for every one available to Congress. Consider the Police Power of the State. Every moment we feel its direct impact. By what right does the state tell us how poisons may be dispensed, where to park our automobiles, when to segregate infectious diseases, plus the many minor restrictions over our own home property—accumulation of refuse or prohibition of holiday explosives. All of these regulations certainly conflict with what a rugged individualist might consider inalienable rights. Yet even such an individualist, when his home is burning, heartily approves of the right of way to fire-engines. Again, the right to free speech is curbed. By what title are you restrained from spreading rumors concerning the status of a bank or a trust company? On inquiry we find that man may not talk as he pleases—that certain expressions of individualistic thought are antagonistic to social welfare—hence illegal. These legal norms rest upon the will of the people, an outgrowth of custom, expressed first in police regulations, later codified in state legislation.

With increased population and the development of modern machinery and newer methods of distribution and amusement, heretofore unheard-of dangers arise; and the people retain the right of pronouncement with respect to these hazards. For example, do we wish speed or safety in travel?

A generation ago speed laws were a joke; twenty-five years ago flying licenses were not required; twenty years ago no law-limited radio programs; ten years ago, despite the fact that many trade practices were in disrepute, no law prohibited their use. At present 99 per cent of us agree that such laws are essential. Five years ago, a Fair Trade law was a theory. We smiled and said: "Oh, yes, some day, mayhap, but not yet, lest we interfere with free exchange of goods." And yet today, approximately one-half of the population of these United States is under a Fair Trade law. Nine states have tardily enacted a *modern type of statute.* Ten legislatures, within two years, have clearly seen that the legal force which protects the health of their children and the stability of our great financial institutions, which

prevents fire, pestilence, insurrection, the sale of impure foods and obscene literature, is the same power of the people which now undertakes to safeguard *the owner* of a twenty-million dollar trade-mark, as well as the little merchant who sells a tube of toothpaste so costly trade-marked.

It cannot be over-emphasized that Fair Trade laws aim to serve the small shopkeeper with his small stock, just as much as they are intended to *protect owners* of million dollar trade-marks. And conversely, Fair Trade laws will protect the consumer, not merely indirectly by enabling the independent merchant to remain solvent and to maintain his position as a sustaining citizen, but by eliminating a multitude of fraudulent practices which follow "loss leader" advertising. These abuses are too well known among ourselves to require discussion; but the public's education on this subject has never received deserved attention.

Do you not get the right prospective?—A nation of almost 130,000,000 people, including a conservative estimate of 120,000,000 fair-minded citizens.—Forget for the moment the 10,000,000, and bear in mind that there are 120,000,000 of us, *little folks*. We are The People. Aren't we, The People, entitled to determine under which laws we'll live? Now you and I have *the requisite power*. *Let's use it.* If we do not, I foresee cataclysmic upheavals because of our very stupidity.

When the glib salesman of an unfair manufacturer or a sleek competitor gabs about constitutional law and talks of Fair Trade laws as the bunk, don't discuss the matter. You need not get on the defensive. Simply state: "I'm sorry, Mister, but I've studied law myself, and I'm too busy to argue with anyone who hasn't."

The Greeks had a word for it, and let me refresh your memory—no people better understood the value of local rule in relation to law, for which they had profound respect. Government was The People. In fact, Athens was termed a "City State." Can you not hear the echoes of the cheering audience as the Athenian in the play rebukes a stranger with these words:

> "It is a city and *free*.
> The *whole folk* year by year, in parity of service
> is *our* King."

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## DEVELOPMENT OF PHARMACY IN WEST CHINA.

BY E. N. MEUSER.*

"Four Thousand Years of Pharmacy" gives an exceedingly interesting account of the ancient history of Egyptian and Babylonian pharmacy. Comparatively little mention is made, however, of the pharmacy of ancient China. The author states: "We know less about the pharmacy of ancient China than we do of that of either the Egyptians or Babylonians. This is probably because the Chinese have always been uncommunicative and secretive to an unusual degree, and because there has been less research into the ancient literature of the living nations than into the literature of races that have disappeared." This is, unfortunately, only too true, and the fact constitutes a challenge, or opportunity for those with the time and inclination in this direction, to delve into what the writer considers an

* Chengtu, W. China, Feb. 16, 1935.

exceedingly fascinating study of Chinese pharmaceutical lore reaching back into forgotten ages. The written history resulting from such a study would be a very valuable contribution indeed. The ancient type of Chinese medicine shop conducted by a combined pharmacist-physician continued fairly general until the arrival in China of the medical missionary and the representatives of Western pharmaceutical manufacturing houses. With the introduction of Western medicines there has been a gradual transformation of the old-time, small, floorless drug shop with its miscellaneous assortment of crude native drugs of animal and vegetable origin cluttering the walls, ceiling and counter, to the modern type of drug store—larger, cleaner, bright and airy, and with a great variety of drugs, chemicals,

The first class of pharmacists to graduate from any University in China—June 1934, of the Department of Pharmacy of the West China Union University, Chengtu, W. China. *Second row:* Dr. Beech, Chancellor of University; Dr. Djang, President of University; Miss Foster, Dean of Woman, of University; Dr. Meuser, Head Department of Pharmacy, of University; Mr. Chang, Dean of Science, of University.

surgical supplies, chemical apparatus and patent medicines on display, and with quite up-to-date drug store fixtures and furnishings.

Unfortunately, in most cases these drug stores are in charge of people who have not had pharmaceutical or medical training, and there is, therefore, the promiscuous buying and selling of Chinese and foreign drugs, potent, poisonous and otherwise. This obviously constitutes a real danger to public health. The Chinese Government Ministry of Health, realizing this danger, has prepared considerable legislation governing the practice of pharmacy in China. It provides for the sale of medicines and the dispensing of prescriptions by pharmacists only who have the necessary qualifications. It also endeavors to provide for efficient dispensing of medicines in hospitals by stipulating that there shall be qualified pharmacists on the staff of all hospitals.

Because of the great amount of medicine required in so vast a population as that of China, and the fact that China produces such a tremendous variety and abundance of crude drugs, the task of research in these crude drugs and the subsequent manufacture into modern medicines calls for the services of many trained pharmacists.

Obviously, without schools of pharmacy in which to train these pharmacists, neither this important work of research and manufacture nor the enforcement of the laws of the Central Government, as just mentioned, can be carried out for the time being. However, in order to try to meet these needs a few schools of pharmacy have been opened in different parts of China during the past three years. Not the least important among these schools recently opened is the Department of Pharmacy in the West China Union University, Chengtu, W. China. In this Department a course of four years of instruction is given leading to the degree of Bachelor of Science in Pharmacy (B.S. in P.).

When the Department of Pharmacy of the W. C. U. U. was opened in the Fall of 1932, there was an enrollment of sixteen students in the first year. In addition to these, there were four other splendid students who had already completed two years of studies in Science and who transferred from other departments and registered in the third year of pharmacy. In June 1934, therefore, these four students, having finished their studies, had the unique distinction of being the first class of pharmacists to graduate from any University in China. This is but the beginning of other and larger classes to follow. These graduates are now doing splendid work in their respective positions.

In 1934 the Central Government of China, at Nanking, showed its general interest in the development of pharmacy in China, and its special interest in and recognition of the Department of Pharmacy of the West China Union University by making a grant of five thousand dollars ($5000.00 Chinese) toward the purchase of equipment for the department. This, naturally, was highly appreciated, as it enabled us to secure some of the apparatus most urgently needed.

Then, also, the department was the recipient of a further gift of what is expected to be an annual sum of money from a well-known firm of pharmaceutical chemists in Germany toward equipment and salary of an assistant teacher. This, too, was much needed and was gratefully received.

While these grants have given pharmacy in West China a good start, further financial coöperation will be constantly needed for maintenance.

As an industrial profession, modern, scientific pharmacy has a real, vital, missionary service to render to China. In its various phases of work, such as research in crude drugs, manufacture of medicines, hospital dispensing and private practice, it offers in a very practical way a workable solution for some of China's economic problems by giving pleasant and remunerative employment to those engaged in the profession, while at the same time rendering a materially helpful service to the public.

The future prospects for the Department of Pharmacy of the West China Union University are quite encouraging, and those of us engaged in this work count it a privilege to have a share in this phase of God's great work in China. We shall be glad to hear at any time from friends interested in our work here.

# THE DEPARTMENT OF THE AMERICAN ASSOCIATION OF COLLEGES OF PHARMACY

C. B. JORDAN—CHAIRMAN OF EXECUTIVE COMMITTEE, A. A. C. P., EDITOR OF THIS DEPARTMENT.

Your Editor is pleased to offer to the College Section the following paper by Professor Walter Crosby Eells, a well-known and authoritative writer on the center of population of various phases of education. All of us expected the center of population of pharmaceutical education to move westward as more colleges of pharmacy were established west of the Alleghanies, but I doubt that any of us expected the sharp reversal as indicated in the past decade.

In Professor Eells' contribution there is food for thought for every executive and teacher of Pharmacy.—C. B. JORDAN, *Editor*.

## THE CENTER OF POPULATION OF PHARMACEUTICAL EDUCATION, 1870–1930.

BY WALTER CROSBY EELLS.*

The *center of population* is defined by the United States Census Bureau as "the point upon which the United States would balance, if it were a rigid plane without weight and the population distributed thereon, each individual being assumed to have equal weight and to exert an influence on the central point proportional to his distance from the point." In other words it is the center of gravity of the weighted plane or a two-dimensional average of the population.

The determination of this point at the regular decennial census intervals is the best method that has been devised by the Census Bureau to trace compactly the rate and direction of general movements of the population. The first official computation of this point was made under the direction of Francis A. Walker, superintendent of the ninth census, for publication in the first statistical atlas of the United States published in 1874.[1] At that time the position of the center of population was computed for each census year since 1790.

So convinced has the Census Bureau become of the value of this mode of summarizing population trends that in later years it has made much more extensive use of the same method. In 1910 the positions of the center of population since 1880 for each state were computed. In 1920 the method was further extended to include centers of foreign-born population, of Negro population, of urban and rural population, and even to determine centers of agriculture, of manufacturing, of number of farms, of farm area, of improved acreage, of value of farm property, and of the production of corn, wheat, cotton and oats.[2]

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* Professor of Education, Stanford University.

[1] Walker, Francis A. (Compiler), "Statistical Atlas of the United States, Based on the Results of the Ninth Census." Washington, 1874, page 5. For an earlier unofficial computation and other information regarding history of the center of population see Eells, Walter Crosby, "The Center of Population—a Prophecy and Its Fulfilment," in *The Scientific Monthly*, 20, 78–84, January 1925.

[2] Sloane, Charles S. (Compiler), "Center of Population and Median Lines and Centers of Area, Agriculture, Manufactures and Cotton." (Fourteenth Census of the United States, 1920.) Washington, 1923, pages 12–41.

Why not then educational centers of population as well? A method which has proved so valuable in summarizing movements of general population should be equally valuable in studying the movements of the higher educational population—the student enrollment in the colleges, universities and professional schools of the United States.[1] The object of this paper is to report and discuss the results of computations which have been made by the author to determine the *center of population of pharmaceutical education* for each census year from 1870 to 1930.

## METHOD OF COMPUTATION.

The data upon which the computations are based were taken from the official reports of the United States Office (formerly Bureau) of Education.[2] These statistics are not perfect, but they probably are as accurate and reliable as are available. The method used was the same as that of the Census Bureau, with the substitution of "states" (with their centers of population as computed by the Census Bureau) for "square degrees" as the unit of computation.[3] The number of students of pharmacy involved for each census year is as follows:

| | |
|---|---|
| 1870 | 440 |
| 1880 | 1,347 |
| 1890 | 2,871 |
| 1900 | 4,042 |
| 1910 | 6,226 |
| 1920 | 5,026 |
| 1930 | 10,906 |

It is noteworthy, although not directly pertinent to this study to observe that the reported number of students of pharmacy more than doubled between 1920 and 1930.

## LOCATION OF CENTERS.

The latitude and longitude and approximate location of the center of pharmaceutical education for the seven different decennial years, 1870–1930, are shown in Table 1 and on the map of Fig. 1. The map also shows the location of the general

[1] For two such studies, see Walter Crosby Eells, "The Center of Population of Higher Education," *School and Society*, 24, 339–344 (September 11, 1926); and "The Center of Population of Engineering Education, 1900–1930," *Journal of Engineering Education*, 25, 662–669 (June 1935).

[2] Reports of the Commissioner of Education: 1870, page 524; 1880, page 154; 1889–1890, page 1023; 1899–1900, 2, page 1973; 1910, 2, page 1034; Biennial Survey of Education, 1918–1920 (*Bulletin*, 1923, No. 29), page 294; Biennial Survey of Education, 1928–1930 (*Bulletin*, 1931, No. 20), pages 349–350.

[3] "In making the computations for the location of the center of population it is necessary to assume that the center is at a certain point. Through this point a parallel and a meridian are drawn, crossing the entire country. . . . The product of the population of a given area by its distance from the assumed parallel is called a north or south moment, and the product of the population of the area by its distance from the assumed meridian is called an east or west moment. In calculating north and south moments the distances are measured in minutes of arc; in calculating east and west moments it is necessary to use miles on account of the unequal length of the degrees and minutes in different latitudes. The population of the country is grouped by square degrees—that is, by areas included between consecutive parallels and meridians—as they are convenient units with which to work."—SLOANE, CHARLES S., *loc. cit.*, page 5.

center of population of the country for the same dates. The abbreviation "C. S." in Table I indicates that the town named is the county seat of the county in which the given center is located.

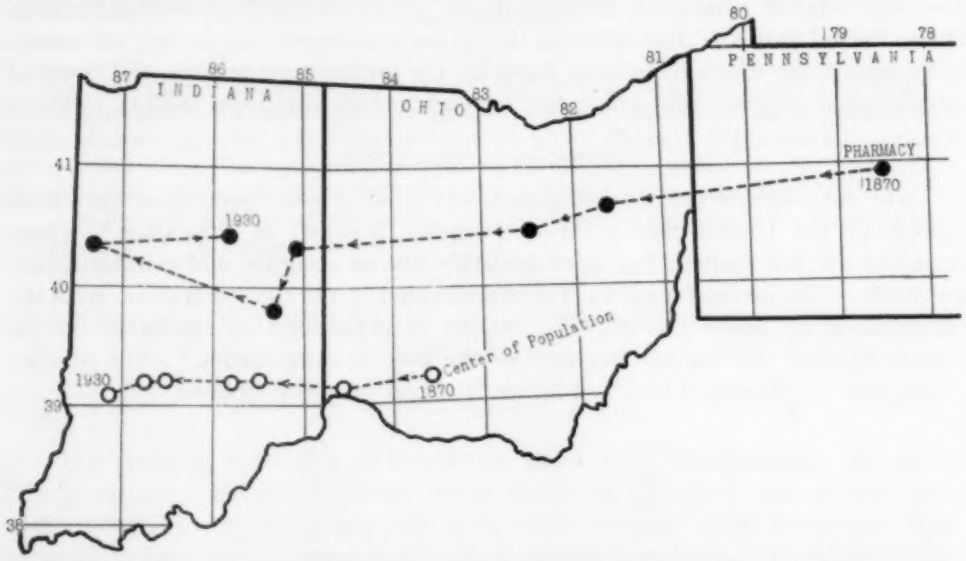


Fig. 1.—Movement of centers of population of pharmaceutical education and of the general population, 1870–1930.

TABLE I.—LOCATION OF CENTERS OF POPULATION OF PHARMACEUTICAL EDUCATION, 1870–1930

| Year. | Latitude North. | Longitude West. | State. | County. | Distance from Important Cities and Towns. |
|---|---|---|---|---|---|
| 1870 | 40° 56′ | 78° 33′ | Penna. | Clearfield | 84 miles N.E. of Pittsburgh |
| | | | | | 8 miles S.W. of Clearfield, C. S. |
| 1880 | 40 39 | 81 39 | Ohio | Holmes | 31 miles S. of Akron |
| | | | | | 15 miles N.E. of Millersburg, C. S. |
| 1890 | 40 24 | 82 30 | Ohio | Knox | 39 miles N.E. of Columbus |
| | | | | | 1 mile N.W. of Mt. Vernon, C. S. |
| 1900 | 40 21 | 85 02 | Indiana | Jay | 22 miles N.E. of Muncie |
| | | | | | 6 miles S.W. of Portland, C. S. |
| 1910 | 39 50 | 85 20 | Indiana | Henry | 23 miles S. of Muncie |
| | | | | | 7 miles S.E. of Newcastle, C. S. |
| 1920 | 40 21 | 87 20 | Indiana | Warren | 58 miles N. of Terre Haute |
| | | | | | 4 miles N.W. of Williamsport, C. S. |
| 1930 | 40 25 | 85 49 | Indiana | Grant | 48 miles N.E. of Indianapolis |
| | | | | | 12 miles S.W. of Marion, C. S. |

The most outstanding fact shown is the rapid shift westward during the half century from 1870 to 1920 of the center of population of pharmaceutical education—a total of 463 miles in only fifty years. This movement carried it from a point in Western Pennsylvania across Ohio and Indiana almost to the Illinois line. It is surprising to note, however, the sharp reversal of a half century's trend in its sudden movement eastward from 1920 to 1930 of 80 miles back into the eastern part of Indiana. The trend has been steadily southward for the first forty years, but in the past two decades it has shifted northward again although still more than 30 miles south of its 1870 position. The movement of the center of population for education in pharmacy, in miles for each decade, is summarized in Table II.

TABLE II.—MOVEMENT OF CENTER OF POPULATION OF PHARMACEUTICAL EDUCATION, 1870–1930.

(In Miles during the Preceding Decade.)

| Year. | From Point to Point in a Straight Line. | Northward. | Southward. | Eastward. | Westward. |
|---|---|---|---|---|---|
| 1880 | 162.9 | .. | 16.7 | .. | 162.9 |
| 1890 | 47.1 | .. | 14.7 | .. | 44.8 |
| 1900 | 133.5 | .. | 3.2 | .. | 133.5 |
| 1910 | 35.0 | .. | 31.2 | .. | 15.9 |
| 1920 | 110.6 | 31.2 | .. | .. | 106.1 |
| 1930 | 80.0 | 3.9 | .. | 79.9 | ... |
| Totals (net) | | | 30.7 | | 382.4 |

Reference to the map of Fig. 1, shows that the center of population of pharmaceutical education has always been north and with one exception (1920) has also always been east of the center of general population for corresponding years. While the center of general population has moved westward only 190 miles in six decades, the center of pharmaceutical education shifted westward 462 miles in the first five decades. Even if the 80-mile eastward shift of the last decade be taken into account, the 1930 position is more than twice as far from its 1870 position as was the case for the general population. Westward the Course of Empire has taken its way, but far more rapidly for students of pharmacy than for the general population. The north and south distance between the two centers, which was 120 miles in 1870, had decreased to 93 miles in 1930. Relative to the distribution of the general population, there always has been a much greater emphasis on education in pharmacy in the North than in the South, and except in 1920 in the East than in the West. Viewed as a whole, however, the East has lost much of its earlier primacy in the field of pharmaceutical education.

What the situation will be in 1940 is problematical. The general center of population will doubtless be at or near the Indiana-Illinois line. Whether the pharmaceutical center will continue eastward, or will reverse itself again and continue its general westward trend is an open question. It seems doubtful, however, whether it will move entirely out of Indiana by 1940.

Such facts as are presented in this paper, summarizing long time trends, may furnish food for thought and speculation on the part of those responsible for the education of the pharmacists of the future.

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MEDICAL MILE-STONES.

"The Medicine Man of the American Indian and His Cultural Background" is the rather lengthy but arresting title of a recent study by Dr. William Thomas Corlett, professor emeritus after long service on the Faculty of Medicine of Western Reserve University. The Indian tribes included in the study inhabit or have inhabited the lands from the Arctic Circle to Terra del Fuego and from the Atlantic to the Pacific Oceans. Although some of the information in the volume has been acquired by the author through first-hand contacts, much of it is the result of careful study and research into records, histories and other documents. A valuable bibliography covers eighteen pages and includes publications in six languages dated from 1510 to 1934.—From *Medical Milestones*, September 4th.

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# THE DEPARTMENT OF THE NATIONAL ASSOCIATION OF BOARDS OF PHARMACY

H. C. CHRISTENSEN, SECRETARY, 130 NO. WELLS ST., CHICAGO, ILL.

## SYNOPSIS OF PROCEEDINGS OF THE THIRTY-SECOND ANNUAL CONVENTION OF THE NATIONAL ASSOCIATION BOARDS OF PHARMACY HELD IN PORTLAND, OREGON, AUGUST 5–6, 1935

The thirty-second annual meeting of the National Association of Boards of Pharmacy made an exceptionally good attendance record for the first meeting to be held in the Pacific Northwest—32 states were represented by 59 delegates, with 7 honorary members (former board members) in attendance.

President Charles Hall Evans (Georgia) appointed the following Credentials Committee: E. E. Magee (Oregon) *Chairman;* A. L. I. Winne (Virginia); John K. Clemmer (Florida).

The following delegates responded to Roll Call:

Alabama, L. C. Lewis
Colorado, Arthur D. Baker; Wm. J. Bishop
Connecticut, Edward J. Murphy; Hugh P. Bierne; George Blackall; Charles Gustafson; Wm. J. Dunphy
District of Columbia, C. J. Fuhrmann or Samuel L. Hilton (proxies)
Florida, W. M. Hankins; John K. Clemmer
Georgia, Charles Hall Evans
Idaho, F. L. Christenson
Indiana, Edgar A. O'Harrow
Iowa, George W. Gillman; George Judisch
Kansas, Joe Paradowsky; Mac Childs; Frank Milne; Pat Mulligan; Walter Varnum
Kentucky, J. W. Gayle
Maine, Leon H. Marr; Adolphe L. Rivard
Maryland, Robert L. Swain
Minnesota, Wm. C. Muesing; Edw. J. Prochaska
Massachusetts, Timothy S. Shea
Nevada, R. W. Fleming; E. B. Loring; H. M. Skeels
New Hampshire, P. J. Callaghan; George A. Moulton
New Jersey, R. P. Fischelis
New York, F. C. A. Schaefer; Hugo Schaefer
North Dakota, P. H. Costello; E. P. Martin
Ohio, M. N. Ford; F. H. King
Oklahoma, W. D. Patterson; Ned Milligan
Oregon, E. E. Magee; John F. Allen; M. E. McKee; M. C. Kaegi; Frank C. Berg; Linn E. Jones
Pennsylvania, L. L. Walton
Puerto Rico, H. C. Christensen (proxy)
South Dakota, H. J. Schnaidt; E. C. Severin
Tennessee, Geo. W. Lamar
Texas, Roy Phillips
Virginia, A. L. I. Winne
Washington, Peter H. Brady
West Virginia, Roy B. Cook
Wyoming, R. C. Shultz

One hundred per cent attendence from Connecticut, Kansas, Oregon.

Honorary Members: Albert Zimmerman; F. Mortenson; Chas. J. Clayton; W. P. Porterfield; Chas. H. Avery; John Culley; C. T. Gilbert.

John Culley introduced Secretary W. M. Fulton of the California Board of Pharmacy.

Vice-President Shultz assumed the Chair during the reading of the Presidential Address. (See page 673, August JOURNAL, A. PH A.)

The following Committee on President's Address was appointed by Vice-President Shultz: R. W. Fleming (Nevada) *Chairman;* A. D. Baker (Colorado); Ned Milligan (Oklahoma).

### SECRETARY'S REPORT.

Secretary Christensen reported a cash balance in his accounts of $2815.27 as of June 30, 1935; also the issuance of 613 reciprocal applications during the fiscal year. The report included a review of the work of the central office in the legislative and examination fields; a study of repeat failures in board examinations; a description of the new administrative set-up in Rhode Island; a complete report of the Nebraska situation where all reciprocity had been temporarily suspended on order of the N. A. B. P. Executive Committee early in June; a suggested plan under which

experience *since* registration can be counted when the applicant is short *prior* time, the details of the plan being submitted in resolution form and were referred to the Resolutions Committee.

Treasurer J. W. Gayle reported funds totaling $5389.86 in his accounts.

EXECUTIVE COMMITTEE REPORT.

Chairman A. L. I. Winne read the report. The mid-year meeting had again been omitted on account of the expense.

The report included a statement of income and expense from May 1, 1934 to June 30, 1935 (fourteen months), showing a cash increase of $2339.58, with total cash assets of $8205.13 as of July 1, 1935. The budget report showed that only $13,848.14 had been spent of the $14,400.00 appropriated—a saving of $551.86.

The question of date of removal of the offices of the Association to the American Institute of Pharmacy in Washington was considered and a motion adopted that the date be left entirely to the discretion of Secretary H. C. Christensen. Certain financing is necessary to cover the cost of removal, refurnishing of the new offices, etc.; also Secretary Christensen is needed in Chicago to superintend the installation of the Pharmacy Exhibit of the World's Fair in the Rosenwald Museum of Science and Industry in Chicago as a part of the new Department of Medical Science which is being planned; therefore a definite date could not be set at this time.

The Executive Committee approved the resumption of reciprocal relations with Nebraska on the basis outlined in a letter received from Dr. P. H. Bartholomew, Acting Director of the Nebraska Department of Health, which provides that the N. A. B. P. preliminary blank is to be mailed out by his Department on all inquiries with a special letter (as per copy submitted by him) explaining the Nebraska situation under the present law, with the understanding that the Nebraska law is to be amended at the next legislative session so that the usual N. A. B. P. procedure can be legally carried out.

A budget totaling $15,250.00 was adopted by the Executive Committee for the ensuing fiscal year 1935–1936.

COMMITTEE REPORTS.

The *Advisory Examination Committee* report dealt primarily with statistics that had been collected by the Chairman, H. C. Christensen, on the repeat failure problem. His conclusion, based on this information, was that the problem was not serious enough in pharmacy, on account of the high entrance requirements for the board examinations, to warrant limiting the number of permissible failures to three.

Mac Childs (Kansas) presented a *Legislative Committee* report that covered 47 states—a record in completeness. He expressed himself as being personally opposed to the principle of limiting the sale of barbituric acid derivatives and other hypnotics to physicians' prescriptions, a type of restriction now gaining popularity. He deemed registration of the sale by the pharmacist, with a precaution against misuse, a sufficient public safeguard.

R. L. Swain (Maryland) delivered a most comprehensive report on the *National Legislative* situation, covering in detail the Copeland bill S-5, to amend the Federal Food and Drugs act, a proposed act regulating the practice of pharmacy in the District of Columbia, and several bills with regard to the Medical Department of the U. S. Army which are of interest to pharmacy. A recommendation approving S-5 was included in the report, which was referred to the Resolutions Committee.

Chairman W. M. Hankins (Florida) of the *Grievance Committee* re-iterated the report of previous years—no grievances reported.

Secretary H. C. Christensen in his report as chairman of the *National Certificate Committee* briefly reviewed previous attempts to establish a national certificate and then outlined a plan for future consideration by the boards which he believed workable. Details will be published in the proceedings.

Roy Bird Cook (West Virginia) as Chairman of the *Committee on Pharmaceutical Jurisprudence* had contacted all the boards on the subject of making this a written and compulsory examination subject. The answers revealed that few boards were now giving this as a written subject, that others preferred to keep it as part of the oral quiz, and that many were not in favor of making it compulsory. R. P. Fischelis (New Jersey), a member of the committee, did not agree

with the conclusions of the committee, so his separate statement was read. The report of the committee was accepted, however, and the committee continued.

R. L. Swain (Maryland) reported for the *Committee on Code Matters*, which had had little opportunity to function on account of the unconstitutionality of NRA. In view of the fact that a skeleton organization of NRA is being retained, he recommended that the committee be continued in case something should come up later that requires action.

Unfortunately A. C. Taylor (District of Columbia) chairman of the *Committee on Minimum Standards of Technical Equipment for Pharmacies* was not present at the meeting. He sent in a detailed report, however, covering the two years of activity of the Committee. The report concluded with a recommendation that the N. A. B. P. endorse the establishment of such standards and urge member boards to adopt them. The recommendation was referred to the Resolutions Committee.

As Chairman R. W. Fleming of the *Committee on President's Address* had been called home from the meeting by wire, Arthur D. Baker (Colorado) delivered the report, highly complimenting the president on his splendid address.

### DISTRICT REPORTS.

Very interesting reports on the work of the various districts were delivered by Vice-President George Moulton (No. 1), Acting Chairman Mac Childs (No. 6); and Vice-President Shultz of District No. 7 reported that a conference of the Western boards would be held on Wednesday morning, after the close of the N. A. B. P. sessions, at Portland. In the absence of Vice-President Woodside, R. L. Swain reviewed the work of District No. 2.

R. L. Swain as Director of the Department of Education urged continuation of the Department, although no funds were available during the year just completed for that work.

L. C. Lewis (Alabama) delivered a very moving tribute to the memory of Dr. W. E. Bingham, much loved secretary of the Alabama Board and the first honorary president of the N. A. B. P. who had passed on to his reward during the year.

### RESOLUTIONS COMMITTEE.

As none of the standing members of the Resolutions Committee were present at the meeting and only two members of the Committee on Constitution and By-Laws, President Evans combined these committees and asked L. C. Lewis, R. W. Fleming and R. L. Swain to serve.

The report of the Committee, with the exception of one resolution which was deleted, was accepted. The following are the adopted resolutions:

No. 277: *Resolved*, that in the interest of bringing about closer coöperation between states, every board of pharmacy should be represented at the annual N. A. B. P. convention. Where the state treasury allows no such budget, the state pharmaceutical association should make some provision for sending a board delegate to represent the interests of the pharmacists of that state. Where neither the state treasury nor the pharmaceutical association can assume this expense, some consideration should be given to the willingness of board members personally to make such a sacrifice when the appointment lists are made up, but not overlooking the fact that fitness as an examiner should be the first consideration.

No. 278: *Resolved* by the National Association of Boards of Pharmacy that the Federal Food and Drugs Act is not sufficiently broad to afford the public the necessary protection in the matter of foods, drugs, and cosmetics, and that there exist pressing reasons for new legislation on this subject;

*Resolved further*, that it is the opinion of the N. A. B. P. that the present draft of Senate Bill No. 5 meets the existing situation in a reasonably satisfactory manner and the passage of the bill is urged at this session of Congress.

No. 279: *Resolved*, That all member boards be urged to send copies of all bills introduced in the respective state legislatures which affect pharmacy either favorably or unfavorably to the central office of the N. A. B. P. so that they may be studied as well as being made available to the boards of all states.

*Be it further resolved*, that all legislation sponsored by boards be submitted for suggestion and criticism so that state legislation bearing upon pharmacy may be made as uniform as possible.

No. 280: *Resolved* by the National Association Boards of Pharmacy that in the interest

of public health, all pharmacies be required to possess the equipment and apparatus necessary to proper compounding of physicians' prescriptions as well as the general practice of pharmacy and that each member board be urged to secure legislation authorizing it to prescribe the minimum for such technical equipment and

*Resolved further*, that a Committee be continued in the N. A. B. P. to advance the purposes of this resolution and to act as advisors in the matter to the various state boards.

No. 281: Recognizing the necessity for a full understanding of the conditions under which pharmacy is practiced in the various states as furnishing the soundest basis for pharmaceutical legislation as well as giving the strongest support to a program for pharmaceutical betterment, *resolved*, that the National Association Boards of Pharmacy sponsor a study of economic and professional conditions in each state, the study to consist of a questionnaire to be prepared by the central office and to be issued in each state by the respective board of pharmacy for the purpose of establishing reliable data upon the following: (1) the number of drug stores in the state; (2) population of the state; (3) ratio of drug stores to population; (4) volume of drug business; (5) amount of prescription work; (6) the number of new drug stores opened within the year; (7) the number of registered pharmacists; (8) the number of unregistered employees; (9) the number of students of pharmacy in state; (10) ratio of students to the number of existing stores; (11) a statement of those registered by examination over a ten-year period so that trend in registration may become known; (12) defects in existing pharmacy laws and suggestion for their improvement; (13) and all such other data as may be considered helpful;

*Resolved further*, that the scope of this study may be extended or restricted as the judgment of the President and the Secretary of the N. A. B. P. may dictate;

*Resolved further*, that the president is authorized to appoint a special committee to carry out this study if he deems it desirable.

The report of the Standing Committee on Resolutions, which had been prepared in advance covering the district resolutions, was then read and received on motion. No action was taken on the individual resolutions therein contained, as none of the committee members were present and few of the district chairmen to lead in the discussion of the matters presented.

### PRESENTATION OF PLAQUES.

Chairman J. A. J. Funk (Indiana) of the Committee on Plaques was not present at the meeting, therefore the presentation was made by Mac Childs of Kansas, who originally made the suggestion that the N. A. B. P. present a scroll or plaque to each of the four officers of the Committee on Pharmacy Exhibit (Chicago World's Fair, 1933–1934) to show its appreciation of the work done by these men in bringing the message of pharmacy to the public so effectively.

The recipients were H. C. Christensen, *Chairman;* Julius H. Riemenschneider, *Treasurer;* Frank B. Kirby, *Secretary;* and Dr. A. S. Burdick, *Vice-President* (deceased), presentation to be made to the widow.

### AMENDMENT OF THE CONSTITUTION AND BY-LAWS.

As required, a suggested amendment to the Constitution and the By-Laws was read at the first session by Chairman L. C. Lewis, which was later changed in wording by motion at the final session and adopted as follows:

ARTICLE IV, CONSTITUTION.

*Section 1A:* The officers of the Association shall be an *Honorary President*, a *President*, eight *Vice-Presidents*, a *Secretary* and a *Treasurer*, elected annually and who shall hold office until their successors shall be elected and shall have qualified.

ARTICLE II, BY-LAWS.

*Clause (e)*: He must have passed an examination in at least Pharmacy, Chemistry, Materia Medica, Pharmaceutical and Chemical Mathematics and Practical Work, obtaining not less than 75% on Practical Work and not less than 75% general average, with not less than 60% in any one branch. (Effective June 1936, as previously adopted.)

### ELECTION.

A. L. I. Winne (Virginia) reported for the Credentials Committee that the roll and the credentials had been examined and found in satisfactory order.

The Nominating Committee, which consisted of George A. Moulton (N. H.) *Chairman*, Walter Varnum (Kan.), Linn E. Jones (Ore.), R. C. Shultz (Wyo.), and W. M. Hankins (Fla.), delivered the following report for consideration: *Honorary President*, F. H. King, Delphos, Ohio; *President*, Mac Childs, Eldorado, Kan.; *Secretary*, H. C. Christensen, Chicago, Ill.; *Treasurer*, J. W. Gayle, Frankfort, Ky.; *Member Executive Committee*, Chas. Hall Evans, Warrenton, Ga.; *Member Syllabus Committee*, Walter H. Cousins, Dallas, Tex.; *Member Resolutions Committee*, Arthur D. Baker, Denver, Colo. *Vice-Presidents:* District No. 1, George A. Moulton, Peterboro, N. H.; No. 2, John M. Woodside, Philadelphia, Pa.; No. 3, John K. Clemmer, Miami, Fla.; No. 4, Earl Durham, Corunna, Mich.; No. 5, Wm. Muesing, New Ulm, Minn.; No. 6, E. E. Weaver, Ft. Worth, Tex.; No. 7, R. C. Shultz, Worland, Wyo.; No. 8, John F. Allen, Corvallis, Ore. These officers were duly elected by the unanimous ballot of the Association cast by George Judisch (Ia.) who had been particularly selected for the honor, inasmuch as the secretary was a candidate himself.

After installation of officers, the meeting adjourned. (Report of Joint Session with Colleges will be published in annual proceedings; details not yet available.)

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# ASSOCIATION BUSINESS

## AD INTERIM BUSINESS OF THE COUNCIL OF THE AMERICAN PHARMACEUTICAL ASSOCIATION, 1935–1936.

Office of the Secretary, 2215 Constitution Ave., Washington, D. C.

LETTER NO. 3.

September 21, 1935.

*To the Members of the Council:*

*20. Resignation of E. Fullerton Cook as a Nominee for the Presidency.* In addition to the letter addressed to the Secretary on September 14th by Dr. Fischelis, copies of which were sent to members of the Council, a letter has been received from Dr. Arny of which copy is attached. (To members of the Council.)

There is also attached copy of a letter addressed to Dr. Fischelis on September 18th, submitting information about the action taken with respect to previous requests from nominees. (To members of the Council.)

Because of the necessity for an early decision if the ballots are to be sent out within the time required by the By Laws, the secretary discussed the situation with Professor Cook over the telephone on September 20th, and Professor Cook repeated the request that the resignation be accepted for the reasons given in his letter.

The chairman of the Council requests that the announcement be made that a vote will be called for on Motion No. 1 on Saturday, September 28, 1935.

*21. Sale and Exchange of Liberty Bonds.* Motion No. 2 (Council Letter No. 2, page 804) has been carried and the Liberty Bonds referred to have been deposited for exchange at par for Treasury Bonds, 2¼%, 1945–1947, dated September 15, 1935.

Dr. Fischelis commented as follows in voting: "Yes, as a temporary expedient; effort should be made to find more remunerative investments as soon as possible."

*22. Minutes of the First Meeting of the Council.* Copies of the minutes of the First and Second meetings of the Council at Portland are being sent under separate cover.

(*Motion No. 3*) *It is moved by Eberle that the minutes as given in Council Letter No. 1 be approved.*

*23. Report of Committee on Resolutions.* A reprint of this report as it appears in the August issue of the JOURNAL, is being sent under separate cover for the convenience of the members of the Council.

Attention is directed to those recommendations and resolutions which were referred to the Council for consideration or action. These will be referred to in later Council Letters.

*24. Applicants for Membership.* The following applications properly endorsed and accompanied by the first year's dues have been received:

No. 1, Everett Carl Crist, Mission City, B. C., Canada; No. 2, Justus C. Ward, 526 Customs House, Denver, Colo.; No. 3, Arthur H. Neumann, 4821 W. North Ave., Milwaukee, Wis.; No. 4, E. O. Klein, Farmington, Missouri; No. 5, Hamilton Cameron, 5406 Connecticut Ave., Washington, D. C.; No. 6, C. R. Brogan, 600 W. Pico, Los Angeles, Calif.; No. 7, Geo. A. Moulton, Peterborough, N. H.; No. 8, Ferdinand Benjamin Zienty, 4861 Cornelius Ave., Chicago, Ill.; No. 9, August Ulrich, 4715 McCasland Ave., East St. Louis, Ill.; No. 10, Mariko Nishio, Box 667, Milwaukee, Oregon; No. 11, Joseph H. Ammirai, 6295 Third St., San Francisco, Calif.; No. 12, Edgar P. Martin, Hazen, N. Dak.; No. 13, Paul Reznek, 1228 Eye St., Washington, D. C.; No. 14, Aaron Engel, 19 Cumming St., New York, N. Y.; No. 15, Stanley G. Halley, Star Lake Ave., Bloomingdale, N. J.

(*Motion No. 4*) *Vote on applications for membership in the American Pharmaceutical Association.*

E. F. KELLY, *Secretary.*

## LETTER NO. 4.

September 28, 1935.

*To the Members of the Council:*

*25. Resignation of E. Fullerton Cook as a Nominee for the Presidency.* In accordance with the notice given in Council Letter No. 3, preceding letter, a vote is called for on Motion No. 1, Council Letter No. 2, page 804. No additional comments have been received since the issuance of Council Letter No. 3.

*26. Minutes of the First Meeting of the Council.* Motion No. 3 (Council Letter No. 3, page 876) has been carried and the minutes are approved as published.

*27. Election of Members.* Motion No. 4 (Council Letter No. 3, page 876,) has been carried and applicants numbered 1 to 15, inclusive, are declared elected.

*28. Applicants for Membership.* The following applications properly endorsed and accompanied by the first year's dues have been received:

No. 16, Carroll Cornwall, 1927 Jackson St., San Francisco, Calif.; No. 17, Everett S. Ostrum, 1432 Fifth Ave., San Francisco, Calif.; No. 18, Herbert H. Gerding, 3414 Fairfield Ave., Ft. Wayne, Ind.; No. 19, Max L. Miller, 415 W. Durham Rd., Philadelphia, Pa.; No. 20, Fred E. Lehman, 6758 Paschall Ave., Philadelphia, Pa.

(*Motion No. 5*) *Vote on applications for membership in the American Pharmaceutical Association.*

E. F. KELLY, *Secretary.*

## LETTER NO. 5.

October 5, 1935.

*To the Members of the Council:*

*29. Resignation of E. Fullerton Cook as a Nominee for the Presidency.* Sixteen of the eighteen members of the Council have returned voting cards on Motion No. 1 (Council Letters Nos. 2, page 804; 3, page 876; and 4, page 877). Eleven voted "yes," three voted "no" and two did not vote. The motion has, therefore, been carried and the resignation is accepted.

The following notation will appear on the ballot as was done previously in similar cases: "Note by the secretary—Professor E. Fullerton Cook of Philadelphia, Pa., was nominated for president but his name was withdrawn at his request and by permission of the Council."

The ballots will be dated October 15, 1936.

*30. Election of Members.* Motion No. 5 (Council Letter No. 4, preceding letter) has been carried and applicants numbered 16 to 20, inclusive, are declared elected.

*31. Appointment of Committees, etc.* President Costello has made the following appointments (see A. PH. A. JOURNAL, August 1935, page 707):

*Committee on Pharmacy Corps in U. S. Army.*—F. L. McCartney, Chicago, Ill., is added to membership. *Committee to Draft Model Act Restricting Distribution of Drugs and Medicines to Pharmacists.*—F. E. Mortenson, Los Angeles, Calif., is added to membership. *Committee on Development of Pharmacy Laws.*—R. L. Swain, *Chairman*, Baltimore, Md.; R. P. Fischelis, Trenton,

N. J.; Geo. W. Mather, Albany, N. Y.; H. C. Christensen, Chicago, Ill.; Rowland Jones, Jr., Washington, D. C.; M. W. Fulton, San Francisco, Calif.; P. H. Dirstine, Pullman, Wash. *Committee on Transportation.*—R. A. Kuever, Iowa City, Iowa, replaces H. C. Newton. *Councilors to American Association for the Advancement of Science.*—John C. Krantz, Jr., Baltimore, Md., and A. F. Schlichting, Ferguson, Mo. *Committee on Endowment Fund.*—Dr. J. H. Beal has requested to be relieved as a member and as Chairman of the Committee. Dr. Wm. B. Day is designated as *Chairman* and Dr. F. J. Wulling, Minneapolis, Minn., as a member of the Committee. *Committee to Study Constitution and By-Laws.*—R. L. Swain, *Chairman*, Baltimore, Md.; W. B. Day, Chicago, Ill.; J. H. Beal, Fort Walton, Fla.; R. P. Fischelis, Trenton, N. J.; E. F. Kelly, Washington, D. C. *Committee to Study Courses in the History of Pharmacy.*—C. O. Lee, *Chairman*, La Fayette, Ind.; E. J. Ireland, Madison, Wis.; Lloyd E. Harris, Norman, Okla. *National Committee on Professional Information Pertaining to Dental Pharmacy.*—George C. Schicks, *Chairman*, Newark, N. J.; A. O. Mickelsen, Portland, Oreg.; R. W. Clark, Madison, Wis.; A. R. Bliss, Birmingham, Ala.; R. E. Terry, Chicago, Ill.

E. F. KELLY, *Secretary*

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## UNITED STATES PHARMACOPŒIA.

### ABSTRACT OF PROPOSED CHANGES WITH NEW STANDARDS AND DESCRIPTIONS.

### ELEVENTH REVISION.

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#### PART V—BOTANY AND PHARMACOGNOSY.

The Pharmacopœial Convention of 1930 recommended that "abstracts of changes proposed for the U. S. P. XI and new standards and descriptions" be published before final adoption, that those who are not members of the Revision Committee may have an opportunity for comment and criticism.

In compliance with this recommendation, the following abstracts are submitted. The nomenclature and the exact wording does not necessarily represent that to be finally adopted.

Changes in assays and strengths will be found in Part II, on Proximate Assays.

Comments should be sent to the chairman of the Revision Committee.

E. FULLERTON COOK,
43rd and Woodland Avenue,
Philadelphia, Pa.

*Acacia.*—The standard for purity has been changed by the addition of an ash requirement—"not more than 4 per cent of total ash and not more than 0.5 per cent of acid-insoluble ash."

Under "*Powdered Acacia*" the sentence on solubility has been altered—"at room temperature" being inserted after "cold water" and "resulting" inserted before "solution."

In the "*Test for identity,*" the nature of the precipitate has been changed from "gelatinous" to "flocculent or curdy, whitish." A polariscopic test has been added, *viz.*, "A 10 per cent aqueous solution of Acacia, when examined by the polariscope, shows but slight lævorotation."

Under the "*Tests for purity*" the starch and dextrin tests have been amplified by specifying the strength of the acacia solution and requiring it to be boiled and cooled before the addition of iodine T.S.

A test for the water-insoluble residue has been added.

*Aconitum.*—The description has been broadened so as to include subspecies and varieties of *Aconitum Napellus.*

*Agar.*—"(Fam. *Florideæ*)" has been added after "*Gelidium*" in the definition.

The moisture content in the purity rubric has been increased to 18 per cent.

The description has been altered to specify Japanese Agar as the kind containing frustules of *Arachnoidiscus Ehrenbergii.*

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* Permission to reprint for purposes of comment can be had on application to the Chairman of the Board of Trustees, James H. Beal, Fort Walton, Fla.

*Tests for identity.* A solubility and jell test have been made a part of the "Tests for identity." "The color of the fragments treated with iodine T.S." has been amplified to read "with some areas reddish or violet."

A new picric acid test for gelatin has been added.

*Aloe.*—Cape Aloe has been dropped from this monograph.

*Althæa.*—There is an added requirement that Althæa contain "not more than 1 per cent of foreign matter." Under "Unground Althea" the old statement "due to mucilage cells" has been changed to read "with mucilage cells."

*Amylum.*—Under "Description and physical properties," "lenticular" has been changed to read "circular."

*Aspidium.*—The phraseology under *structure* has been somewhat altered, including the change from "glandular hairs" to "oleoresin glands;" from "bundles bicollateral" to "bundles xylocentric;" from "tracheæ" to "tracheids."

*Belladonnæ Folium.*—The titles of the drug have been changed from the plural to the singular number throughout.

Changes under "structure" including the following: "usually with 3 neighboring cells" changed to read "with 3 or 4 neighboring cells;" "crystal cells large, filled with microcrystalline calcium oxalate" changed to read, "cells filled with microcrystals numerous;" "Stem with long, thin-walled, slightly lignified bast" changed to read "Stem, with long, thin-walled, slightly lignified poricyclic fibers, bicollateral fibrovascular bundles, parenchyma interspersed with crystal cells, etc."

*Powdered Belladonna Leaves.* Description slightly changed by introducing "ellipsoidal" before "bordered pores" and deleting the terms "bast" and "wood" before fibers."

Under the "*Tests for purity*" the test has been broadened to read "Rosette aggregates and raphides of calcium oxalate are absent in Belladonna Leaf; when present, adulteration is indicated."

*Belladonnæ Radix.*—Under "*Powdered Belladonna Root*" the "bast fibers" have been changed to "pericyclic fibers."

*Benzoinum.*—The definition has been changed to specify "*Styrax tonkinensis* (Pierre) Craib ex Hartwich" as one of the sources of Siam Benzoin.

The character of the odor of Unground Sumatra Benzoin is changed to read "the odor suggests cinnamates or storax."

In the potassium permanganate test, "strong odor of benzaldehyde" replaces "odor of benzaldehyde." The benzoic acid test has been altered in part to read "the residue is not less than 12.5 per cent."

*Cannabis.*—The description of the structure of the stem and of the powdered drug have been made clearer by elaboration. The term "cystolith" replaces "calcium carbonate" in the description of the non-glandular hairs.

*Cantharis.*—The description of the insect has been elaborated by changing "legs with 5 tarsal joints" to "the first and second pairs of legs with five tarsal joints, the hind pair with four tarsal joints, all with two distal claws." The description of the antennæ has been amplified also.

Under Powdered Cantharides the dimensions of the spicules is changed to read "0.020 mm. in width at the base."

*Cardamomi Semen.*—External color of unground drug changed from "reddish gray-brown" to "pale orange to dark brown." The words "and slightly bitter" were added to the description of the character of the taste.

The description of the structure of the seed is amplified to include the loosely attached membranous arillus and the more detailed description of the stone cells whose lumina contain silica.

The powdered drug description is slightly amplified by clarifying the last clause relating to few pericarp fragments as allowable admixture.

*Carum.*—Caraway Fruit has been added as an additional synonym. The description of the unground drug has been slightly altered by including a clause concerning the secondary ribs which occur between the primary ribs on the dorsal surface. The description of the powdered drug has been slightly amplified to include the presence of few fragments of slightly lignified fibers.

*Caryophyllus.—Unground Clove.* The description has been somewhat altered to conform

with the accepted modern interpretation relative to the stemlike portion of the clove bud which is now called the receptacle and which contains the inferior ovary.

*Cascara Sagrada.*—A requirement has been included that it contain not more than four per cent of foreign organic matter. *Unground Cascara Sagrada.* The color of the outer surface has been amplified to include "purplish brown."

*Structure.* The description of the cork has been changed to read "Cork yellowish brown, purple or reddish brown, up to 10 or more rows of small cells." "Bast fibers in small bundles surrounded by crystal fibers" has been changed to read, "bast fibers in small bundles, more or less surrounded by crystal fibers."

*Tests for identity.* The wording of both tests has been slightly altered, the colors resulting being respectively described as occurring in or of the mixture.

*Cetaceum.—Definition.* "A fatty substance" has been changed to read "A waxy substance."

*Description.* The wording of the sentence dealing with solubility has been made more definite.

*Cinchona.*—The *definition* is changed to include both stem and root barks of Red and Yellow Cinchonas.

The *description* is changed so as to include diagnostic features of root bark as well as stem bark.

*Cinnamomum.*—The purity standard is extended to permit not more than 2 per cent of foreign organic matter.

*Structure.* The description has been slightly altered, particularly in reference to the region of the pericycle where the term pericyclic fibers has replaced "bast fibers."

*Powdered Cinnamon.* "Bast fibers" has been changed to "fibers" and the wavy character of these is indicated, "fragments of somewhat lignified cork" has been added.

*Digitalis.—Standards of potency.* This has been changed: The potency of Digitalis shall be such that 0.1 Gm. shall be equal to not less than 1 U. S. P. digitalis unit. It contains not more than 2 per cent of brown leaves, stems, flowers or foreign organic matter, not more than 8 per cent of moisture and yields not more than 5 per cent of acid-insoluble ash. Under all conditions of storage and transportation, the drug should be kept in water-proof and air-tight containers. A note has been introduced making it mandatory to dispense *Digitalis Pulverata*, when Digitalis is prescribed.

*Powdered Digitalis.* This subcaption has been changed to "Ground Digitalis." The description of the ground drug has been slightly changed. The terminal cell of the uniseriate, non-glandular hairs is indicated as being pointed or occasionally rounded.

*Digitalis Pulverata.* A new article has been introduced, *viz.*, a standardized powdered digitalis.

*Definition.* Digitalis, dried at a temperature not exceeding 60° C. and reduced to a fine powder. The strength of this article is to be such that 0.1 Gm. shall be equal to not less than 1 and not more than 1.1 U. S. P. digitalis units. Powdered Digitalis of a higher potency is to be reduced to the official standard by admixture with the exhausted marc remaining when preparations of Digitalis have been prepared, the marc being dried and finely powdered before mixing. It contains not more than 5 per cent of moisture.

*Description.* Same as for Ground Digitalis.

*Storage.* Preserve Digitalis in water-proof and air-tight containers.

*Ergota.—Purity standard.* The standard of assay has been changed to read, "Ergot, when assayed by the method directed below, possesses a potency, per gram, equivalent to not less than 0.5 mg. of ergotoxine ethanesulfonate." An 8 per cent moisture limit has been introduced.

*Description and physical properties.* Under "Unground Ergot" the thickness has been changed to read "up to 5 mm. thick." External features altered by addition of "occasionally transversely fissured" and color changed to "externally nearly black or purplish brown—internally white, sometimes tinged with pink or gray."

*Structure.* The description has been slightly amplified by adding "hyphal" before cells.

*Storage.* A paragraph has been introduced requiring Ergot to be kept in water-proof and air-tight containers under all conditions of storage and transporation.

*Powdered Ergot.* The word "hyphal" has been inserted before "cells."

*Eriodictyon. Definition.* The author citation has been changed by dropping "Bentham."

*Description.* Under "*Unground Eriodictyon,*" the color of the upper surface has been amplified to read "yellowish to greenish brown." The character of the lower surface is changed to read "greenish to yellowish gray with greenish yellow or brown veins." The taste is changed to read "taste balsamic, bitter, becoming sweetish and slightly acrid."

Under "*Structure,*" "Loose mesophyll" has been changed to "spongy parenchyma." The character of the hairs occurring on the lower surface has been amplified.

*Galla.—Definition.* Changed to read "Nutgall is the excrescence obtained from the young twigs of *Quercus infectoria* Olivier and other allied species of *Quercus* (Fam. *Fagaceæ*)."

*Tests for identity* have been added.

*Gentiana.*—The purity requirements have been extended to include not more than 10 per cent of moisture, and not more than 2 per cent of foreign organic matter.

The description has been slightly altered to indicate the longitudinal wrinkling of the rhizomes and the twisted character of some segments of the rhizome and roots. The external color has been changed from yellowish brown to "generally dark brown, occasionally light brown." The internal color has been changed to yellowish to orange brown.

The description of the powdered drug has been amplified to include fragments of cork and hypodermal cells.

A microsublimation test has been added

*Glycyrrhiza.*—The description of the internal structure has been partially rewritten and made more complete. Under Powdered Glycyrrhiza the width of the tracheæ is cited as "up to 0.200 mm. in diameter." A new method has been introduced in the test for fatty matter.

*Hyoscyamus.*—Under "Structure," calcium oxalate has been deleted following "microcrystals." Under powdered Hyoscyamus, the description of the heads of the glandular hairs is changed to "multicellular."

*Ipecacuanha.*—The Nicaraguan or reddish brown variety of Cartagena Ipecac has been added and changes made in the definition and description so as to include this commercial variety of the drug. The external color description of Cartagena Ipecac has been changed to grayish, grayish brown or reddish brown.

*Kino.*—The rubric paragraph has been changed to read "Kino yields not less than 60 per cent of alcohol-soluble extractive." The Bickford-Bennett method is used in assaying this drug.

*Limonis Cortex.*—The botanical variety name in the definition has been changed from *Limonum* (Risso) Hooker filius to "*Limon* Linné." The description has been amplified by adding "membrane crystals" as occurring in some of the parenchyma cells.

*Myrrha.*—The following tests for purity have been added: "Myrrh becomes purplish to violet when treated with nitric acid." "An ethereal solution becomes violet red when treated with bromine vapors."

The Bickford-Bennett method is indicated for alcohol-soluble extractive.

*Nux Vomica.*—Under description, the thickness has been changed to from 3 to 5 mm.

*Podophyllum.*—The purity requirement has been changed to specify not less than 3.5 per cent of the resin of podophyllum, and a limit of 3 per cent of foreign organic matter has been added.

The description of the unground drug has been partly rewritten and amplified, the internal characteristics being changed to read, "the bark yellowish to grayish, the wood showing a circle of small yellowish xylem bundles, the pith large and grayish."

Under the structure of the rhizome, the outer portion is found to consist of "one to four layers" of suberized cells.

Under Powdered Podophyllum tracheæ "mostly" has been inserted before "with simple pored, etc.," and "cork" has been changed to "suberized."

*Prunus Virginiana.*—In the description of the unground drug the outer surface of both young and older unrossed bark is described, the grayish black color of older bark being added. The structure paragraph has been completely rewritten. Under Powdered Wild Cherry, the color is changed to "light brown to reddish brown." "Calcium oxalate prisms or rosette aggregates numerous" is changed to read "calcium oxalate chiefly in monoclinic prisms but also in rosette aggregates."

The drug is directed to be protected from moisture as well as from light.

*Pulvis Glycyrrhizæ Compositus.*—The description has been augmented by adding "washed sulfur fragments" to the other microscopical elements.

*Rheum.*—In the structure portion of the description "vascular bundles with internal sieve and cambium" is changed to "compound vascular bundles in the rhizome portions with internal sieve and cambium."

The test for the presence of rhapontic rhubarb has been deleted.

*Santalum Rubrum.*—The taste now reads "slightly astringent."

*Sarsaparilla.*—The rubric paragraph has been altered so as to make it mandatory to remove the rhizome and crown portion, if in excess of 4 per cent, before the root is ground or powdered.

The histological portion of the monograph has been slightly altered by inserting "fibro-" before vascular bundles adding "pericambium" as a part of the central cylinder and by changing "groups" to "strands."

*Scilla.*—The description of the powdered drug has been amplified by adding "fragments of red, pink or purple epidermal or parenchyma bulb scale tissue, absent (*Red Squill*)."

*Senna.*—The limit on Senna stems is reduced to eight per cent.

The paragraph on structure has been amplified to include the histology of the midrib region.

*Serpentaria.*—The description of the internal appearance of the unground drug has been changed to read "internally, bark brown, wood yellow and composed of broad, eccentric wedges, pith whitish."

*Sinapis Nigra.*—Under Powdered Black Mustard a portion of its seed coat is permitted to be removed to facilitate the powdering

*Stramonium.*—In the description of the powdered drug, "rod-like crystals" is changed to "prisms" and "sphenoidal microcrystals of *calcium oxalate*" is omitted.

*Tragacantha.*—The test for foreign gums has been deleted.

*Valeriana.*—Under the description of the structure of the root portion, the thickened radial walls of the endodermal cells and the radial fibro-vascular bundle have been introduced.

*Veratrum Viride.*—The description of the histology of the root has been amplified to include the large, irregular cavities in the outer region of the cortex.

*Zingiber.*—Jamaica Ginger is now the only variety recognized.

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## UNITED STATES PHARMACOPŒIA.

### ABSTRACT OF PROPOSED CHANGES WITH NEW STANDARDS AND DESCRIPTIONS.

### ELEVENTH REVISION.

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#### PART VI—ORGANIC CHEMICALS.

The Pharmacopœial Convention of 1930 recommended that "abstracts of changes proposed for the U. S. P. XI and new standards and descriptions" be published before final adoption, that those who are not members of the Revision Committee may have an opportunity for comment and criticism.

In compliance with this recommendation, the following abstracts are submitted. The nomenclature and the exact wording does not necessarily represent that to be finally adopted and doses have not been appended.

Comments should be sent to the Chairman of the Revision Committee.

E. FULLERTON COOK, *Chairman*,
43rd and Woodland Avenue,
Philadelphia, Pa.

*Acidum Aceticum Dilutum.*—Contains, in each 100 cc., not less than 5.7 Gm. and not more than 6.3 Gm. of $HC_2H_3O_2$. The acid is prepared by mixing 158 cc. of Acetic Acid with enough distilled water to make 1000 cc., a change from a gravimetric to a volumetric formula.

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* Permission to reprint for purposes of comment can be had on application to the Chairman of the Board of Trustees, James H. Beal, Fort Walton, Fla.

*Acidum Acetylsalicylicum.*—The melting point is not below 135° C. when determined by placing the sample in a bath at 130° C. and heating at a rate of 3° per minute.

The test for carbonizable substances is standardized in terms of color. See JOUR. A. PH. A., 22, 956–961 (1933).

*Acidum Citricum.*—In the colorimetric test for lead, the volume of lead nitrate solution used for comparison is reduced to 2 cc., a reduction of 50 per cent in lead tolerance.

*Acidum Oleicum.*—Congealing temperature, not above 10° C. Acid value, 188 to 200. Iodine value 85 to 95. The cloud test has been omitted.

*Acidum Salicylicum.*—Dissolve 1 Gm. in 30 cc. of hot distilled water, cool in ice and filter. 15 cc. of filtrate shows no turbidity (*sulfate*) upon the addition of 2 drops of hydrochloric acid and 5 drops of barium chloride T.S.

The test for carbonizable substances is standardized as to color.

*Acidum Stearicum.*—Defined as a mixture of solid acids obtained from fats, consisting chiefly of palmitic and stearic acids.

Congealing temperature, not below 54° C. Iodine value, not more than 4. A powdered form of the acid is also recognized.

*Acidum Tartaricum.*—In the colorimetric test for lead, the volume of lead nitrate solution used for comparison is reduced to 2 cc., a reduction of 50 per cent in lead tolerance.

*Acriflavina.*—A new admission. A copy of the monograph may be obtained from the Chairman of the Committee of Revision.

*Acriflavinæ Hydrochloridum.*—A new admission. A copy of the monograph may be obtained from the Chairman of the Committee of Revision.

*Adeps.*—Solidification point of the fatty acids, 36° to 42° C.

*Adeps Lanæ.*—The free acids in 10 Gm. require not more than 1 cc. of tenth-normal sodium hydroxide for neutralization.

Iodine value, not less than 18 and not more than 36.

*Æther.*—This title is reserved for anesthetic ether.

A new test for aldehydes is introduced. Place 20 cc. of Ether in a colorless, glass-stoppered cylinder and add 7 cc. of a mixture of 1 cc. of alkaline mercuric potassium iodide T.S. with 17 cc. of a saturated aqueous solution of sodium chloride. Stopper the cylinder and shake it vigorously for ten seconds, then set it aside for one minute: the aqueous layer shows no turbidity (*aldehydes* and *ketones*).

A 1 in 10 solution of potassium iodide replaces cadmium and potassium iodide as the reagent for peroxides.

*Æthylenum.*—A new admission. A copy of the monograph may be obtained from the Chairman of the Committee of Revision.

*Æthylhydrocupreinæ Hydrochloridum.*—A new admission. A copy of the monograph may be obtained from the Chairman of the Committee of Revision.

*Æthylis Oxidum.*—This is the title for the newly introduced Solvent Ether. It is to be used for all purposes except anesthesia.

The test for peroxides is identical with that under *Æther*, with the exception that only one minute is allowed for the reaction.

The test for aldehydes is identical with that under *Æther* in U. S. P. X.

In all other respects Ethyl Oxide must satisfy the requirements under *Æther*.

*Alcohol.*—The litmus paper test has been replaced by a direct titration for acidity. 50 cc. of alcohol diluted with 50 cc. of recently boiled distilled water shall require not more than 0.9 cc. of fiftieth-normal sodium hydroxide for neutralization, using phenolphthalein as indicator.

A new test for *organic impurities, aldehydes, etc.*, replaces the silver nitrate test. Place 20 cc. of Alcohol in a glass-stoppered cylinder that has been thoroughly cleaned with hydrochloric acid, then rinsed with distilled water and finally with the Alcohol to be tested. Cool the contents to approximately 15° C. and add, by means of a carefully cleaned pipette, 0.1 cc. of tenth-normal potassium permanganate, noting the exact time of addition. Mix at once by inverting the stoppered cylinder, and allow it to stand at 15° C. for five minutes: the pink color must not entirely disappear.

The test for *acetone* is replaced by the following: To a mixture of 1 cc. each of Alcohol and distilled water add 3 cc. of distilled water and 10 cc. of mercuric sulfate T.S. and heat on a bath of

boiling water: no precipitate forms within three minutes (*acetone, ketones, isopropyl alcohol* and *tertiary butyl alcohol*).

The details of the test for *methanol* have been modified to some extent.

*Aminopyrina* (*Amidopyrina U. S. P. X*).—To 0.1 Gm. of Aminopyrine add 0.1 Gm. of vanillin, 5 cc. of distilled water and 2 cc. of sulfuric acid and heat the mixture to boiling: it develops no more color than is obtained by adding 5 cc. of distilled water and 2 cc. of sulfuric acid to 0.1 Gm. of vanillin and heating the mixture to boiling (*antipyrine*).

*Amylis Nitris.—Assay.* Place about 20 cc. of aldehyde-free alcohol in a 100-cc., glass-stoppered volumetric flask and weigh accurately. From a pipette add from 3 to 4 cc. of Amyl Nitrite, stopper the flask, again weigh accurately and calculate the weight of the Nitrite taken for assay. Add enough aldehyde-free alcohol to make a volume of 100 cc. at 25° C., stopper the flask and mix thoroughly. Proceed as directed for the *assay of nitrites*, using 10 cc. of the alcoholic solution. One cc. of tenth-normal sodium thiosulfate is equivalent to 0.01171 Gm. of $C_5H_{11}NO_2$.

*Assay of nitrites.*—The gasometric assay of organic nitrites has been deleted and replaced by an iodometric assay. An acidified solution of potassium iodide reacts with a nitrite as expressed by the following equation: $2KI + 2HCl + 2C_5H_{11}NO_2 - 2KCl + 2C_5H_{11}OH + 2NO + I_2$.

The liberation and titration of the iodine must be carried out in an oxygen-free atmosphere in order to prevent oxidation by atmospheric oxygen of NO to $N_2O_3$ with subsequent liberation of additional iodine. It is only necessary to bubble carbon dioxide through the mixture contained in a flask as described below to prevent this oxidation, and the carbon dioxide may be supplied from a cylinder of compressed gas or from any laboratory type of gas generator.

*Apparatus.* Fit a 300-cc. Erlenmeyer flask (or wide-mouth bottle) with a 2-hole rubber stopper. Through one hole pass an æration tube leading to the bottom of the flask and constricted to an internal diameter of about 1 mm. at the lower end. Through the other hole pass a glass tube, of at least 6 mm. internal diameter, which will extend about 1 cm. above and below the stopper. Connect the æration tube with a cylinder or generator of carbon dioxide.

*Method.* Place 10 Gm. of potassium iodide in the flask and add 40 cc. of boiling deærated distilled water. Insert the stopper in the flask and pass a stream of carbon dioxide through the flask at a rate of five bubbles per second until the solution has cooled to room temperature. Add 10 cc. of dilute hydrochloric acid (1 in 2) and continue the stream of carbon dioxide for at least three minutes. If any iodine is liberated, as shown by the appearance of a yellow color, cautiously add tenth-normal sodium thiosulfate from a burette, through the outlet tube, until the color is just discharged.

Decrease the flow of carbon dioxide to about 2 bubbles per second, and add the directed volume of the nitrite solution to be assayed with a transfer pipette, passing the pipette through the outlet tube until the tip is just above the surface of the potassium iodide solution. Touch the tip of the pipette to the outlet tube to remove adhering nitrite solution, then rinse the outlet tube with a fine jet of aldehyde-free alcohol from a wash bottle. At once titrate the liberated iodine with tenth-normal sodium thiosulfate, introducing the tip of the burette through the outlet tube.

One cc. of tenth-normal sodium thiosufate is equivalent to

| | |
|---|---|
| Amyl nitrite, $C_5H_{11}NO_2$, | 0.01171 Gm. |
| Ethyl nitrite, $C_2H_5NO_2$, | 0.007505 Gm. |
| Glyceryl trinitrate, $C_3H_5(NO_3)_3$, | 0.0113 Gm. |

*Caution.* When assaying amyl nitrite, the alcoholic solution of the nitrite must not be used later than thirty minutes after its preparation. If more time has elapsed a fresh solution must be prepared.

*Antipyrina.*—A new test for identity is given: To 0.1 Gm. of Antipyrine add 0.1 Gm. of vanillin, 5 cc. of distilled water and 2 cc. of sulfuric acid and heat the mixture to boiling: it develops an orange-yellow precipitate.

*Apomorphinæ Hydrochloridum.*—The identity test with sodium bicarbonate has been replaced by the following: To 5 cc. of an aqueous solution of Apomorphine Hydrochloride (1 in 100) add a slight excess of a solution of sodium bicarbonate (1 in 20): a white or greenish white precipitate is formed. Add 3 drops of tincture of iodine and shake the mixture vigorously: an emerald-green solution is produced. Add 5 cc. of ether, and, after vigorous shaking, allow the

layers to separate: the ether solution is colored deep ruby-red, while the aqueous layer retains its green color.

*Argentum-Proteinicum Forte* (*Argento-Proteinum Forte U. S. P. X*).—The yeast test is replaced by the following: Dissolve 1 Gm. of Strong Protein Silver in 10 cc. of distilled water. Add, all at once, 7 Gm. of reagent ammonium sulfate and stir until coagulation takes place. Filter, and to the clear filtrate add 3 drops of hydrochloric acid: a white precipitate is formed (distinction from *mild protein silver*).

*Argentum-Proteinicum Mite* (*Argento-Proteinum Mite U. S. P. X*).—The yeast test is replaced by the following: Dissolve 1 Gm. of Mild Protein Silver in 10 cc. of distilled water. Add, all at once, 7 Gm. of reagent ammonium sulfate and stir until coagulation takes place. Filter, and to the filtrate add 3 drops of hydrochloric acid: no precipitate is formed (distinction from *strong protein silver*).

*Arsphenamina*.—The following tests for purity have been introduced. Dilute 10 cc. of Arsphenamine solution (1 in 100) in a small flask or beaker with 50 cc. of distilled water. Add 5 drops of phenolphthalein T.S. and titrate with tenth-normal sodium hydroxide, watching the supernatant liquid for the end-point: not less than 3.9 cc. and not more than 4.2 cc. of tenth-normal sodium hydroxide will be required.

Add 0.6 Gm. of Arsphenamine to 20 cc. of distilled water in a small flask or cylinder and agitate gently: a complete solution results within fifteen minutes.

Expose the ampuled product to a temperature of 56° C. for a period of forty-eight hours: it shows no marked change in color, consistency or solubility.

The following caution is appended: The solution must be alkalinized with 0.85 cc. of normal sodium hydroxide for each 0.1 Gm. of Arsphenamine prior to injection.

*Atropina and Atropinæ Sulfas*.—The carbonization test with sulfuric acid is standardized in terms of color.

*Balsamum Tolutanum* (*Tolu U. S. P. X*).—The test for rosin is modified: Shake about 2 Gm. of Tolu Balsam with 20 cc. of carbon disulfide, allow it to stand for thirty minutes, filter the liquid and evaporate the filtrate to dryness. Triturate the residue with 10 cc. of petroleum benzin and filter the solution into a dry test-tube. Add 5 cc. of a sulfuric acid solution (made by mixing equal volumes of sulfuric acid and distilled water and cooling the mixture), shake vigorously, allow the mixture to settle and add acetic anhydride drop by drop: no red, violet or purple band is formed (*rosin*, *rosin oil* or *copaiba*).

*Barbitalum*.—The identity test with mercuric nitrate T.S. is changed slightly, as follows: A saturated aqueous solution of Barbital yields with mercuric nitrate T.S. a white precipitate which is soluble in ammonia T.S.

The carbonization test with sulfuric acid is standardized in terms of color.

*Barbitalum Solubile*.—The carbonization test with sulfuric acid is standardized in terms of color.

*Benzinum Purificatum*.—It is directed to determine the residue upon evaporation at 40° C. in a glass or porcelain dish.

*Betanaphthol*.—The volume of ammonia T.S. used in the solubility test is increased from 25 cc. to 30 cc.

*Caffeine*.—The temperature for the drying of Caffeine is changed from 100° C. to 80° C.

The carbonization test with sulfuric acid is standardized in terms of color.

*Caffeina Citrata*.—The temperature for the drying of Citrated Caffeine, and the caffeinic residue therefrom, is changed from 100° C. to 80° C.

Slight changes are made in the assay for caffeine. The volume of sodium hydroxide T.S. is reduced to 8 cc., and the caffeine is extracted with three or more 20-cc. portions of chloroform.

*Caffeina cum Sodii Benzoate* (*Caffeinæ Sodio-Benzoas U. S. P. X*).—The temperature for the drying of Caffeine with Sodium Benzoate, and the caffeinic residue therefrom, is changed from 100° C. to 80° C

The carbonization test with sulfuric acid is standardized in terms of color.

*Calcii Iodobehenas*.—The tests for identity have been amended by deleting the test for iodine with sulfuric acid and chloroform, and by introducing a test for calcium in the ash.

*Camphora*.—Synthetic Camphor is recognized as well as the natural product.

The specific rotation $[\alpha]_D^{25}$ of synthetic camphor is between +5° and −5°.

Mix 0.1 Gm. of finely divided Camphor with 0.2 Gm. of sodium peroxide in a clean, dry, hard glass test-tube of about 25 mm. internal diameter and 20 cm. in length. Suspend the tube at an angle of about 45° by means of a clamp placed at the upper end, and gently heat the tube, starting at the upper end and gradually bringing the heat toward the lower part of the tube until incineration is complete. Dissolve the residue in 25 cc. of warm distilled water, acidify with nitric acid and filter the solution into a comparison tube. Wash the test-tube and filter with two portions of 10 cc. each of hot distilled water, adding the washings to the filtered solution. Add to the filtrate 0.5 cc. of tenth-normal silver nitrate, dilute with distilled water to 50 cc. and mix thoroughly. The turbidity is no greater than that produced in a control test with the same quantities of the same reagents and 0.05 cc. of fiftieth-normal hydrochloric acid (*halogens*).

*Carbo Activatus.*—(*Replacing Carbo Ligni U. S. P. X*).—A copy of the monograph may be obtained from the Chairman of the Committee of Revision. See also JOUR. A. PH. A., 24, 630 (1935).

*Carbonei Tetrachloridum.*—The carbonization test with sulfuric acid is standardized in terms of color. In the test for the presence of carbon disulfide, dehydrated alcohol is replaced by alcohol.

*Carbromalum.*—The carbonization test with sulfuric acid is standardized in terms of color.

*Cera Alba and Cera Flava.*—A test for carnauba wax has been added. Place 0.1 Gm. of Yellow (White) Wax in a test-tube and add 20 cc. of *n*-butanol. Immerse the test-tube in boiling water and shake the mixture gently until solution is complete. Immerse the test-tube in a beaker of water at 60° C. and allow it to cool to room temperature during a period of two hours. A loose mass of fine, needle-like crystals separates from a clear mother-liquor. Under the microscope the crystals are loose needles or stellate clusters, without the presence of amorphous masses (*carnauba wax*).

*Chloralis Hydras.*—The carbonization test with sulfuric acid is standardized in terms of color.

*Chloramina-T* (*Chloramina U. S. P. X*).—The carbonization test with sulfuric acid is standardized in terms of color.

*Chlorobutanol.*—A new admission. A copy of the monograph may be obtained from the Chairman of the Committee of Revision.

*Chloroformum.*—The specific gravity, 1.474 to 1.478 at 25° C., is transferred to the "Tests for purity," since it is a very accurate indication of the alcohol content of the Chloroform.

The test for *substances decomposable by sulfuric acid* is standardized in terms of color.

Two new tests are added: Agitate 3 cc. of Chloroform with 10 cc. of ammonia-free distilled water in a glass-stoppered cylinder for five minutes. After the liquids separate, transfer 5 cc. of the water extract to another glass-stoppered cylinder containing 40 cc. of ammonia-free distilled water, and add 5 cc. of alkaline mercuric potassium iodide T.S. No turbidity or precipitate will develop within one minute (*aldehydes* and *ketones*).

Into each of two 50-cc. glass-stoppered cylinders of colorless glass, having an internal diameter of 20 mm., place 10 cc. of distilled water, two drops of phenolphthalein T.S. and enough hundredth-normal sodium hydroxide to produce, after vigorous shaking, pink tints of equal intensity. Into one of the cylinders measure exactly 20 cc. of chloroform and again shake the mixture well. Add hundredth-normal sodium hydroxide, drop by drop, from a burette, shaking the mixture well after each addition, until the pink color is reproduced in an intensity equal to that in the cylinder without the Chloroform. Not more than 0.20 cc. of hundredth-normal sodium hydroxide is required to produce a pink color, which is permanent for fifteen minutes (*acids* and *phosgene*).

*Cocaina and Cocainæ Hydrochloridum.*—The carbonization test with sulfuric acid is standardized in terms of color.

*Codeina.*—The carbonization test with sulfuric acid is standardized in terms of color.

*Codeinæ Phosphas.*—Codeine Phosphate must now contain not less than 70 per cent of anhydrous codeine, an increase of 3 per cent, and the water of hydration shown in the chemical formula is reduced to $1^1/_2$ molecules.

*Copaiba.*—The lower limit of non-volatile resin is reduced to 27 per cent.

*Creosotum.*—Creosote begins to distil at about 203° C., and not less than 90 per cent of it, by volume, distils between 203° and 220° C. when determined by Method II under *Boiling and Distilling Points*. This is an increase of 3° in the minimum boiling point.

*Dextrosum.*—Dextrose loses not less than 8 per cent and not more than 10 per cent of its weight when dried to constant weight at 105° C. This fixes a minimum as well as a maximum moisture content.

*Dichloramina-T* (*Dichloramina U. S. P. X*).—The carbonization test with sulfuric acid has been deleted.

*Emetinæ Hydrochloridum.*—The water content has been changed from a maximum of 19 per cent to not less than 8 per cent and not more than 16 per cent.

The carbonization test with sulfuric acid is standardized in terms of color.

*Ephedrina.*—A new admission. A copy of the monograph may be obtained from the Chairman of the Committee of Revision.

*Ephedrinæ Hydrochloridum.*—A new admission. A copy of the monograph may be obtained from the Chairman of the Committee of Revision.

*Ephedrinæ Sulfas.*—A new admission. A copy of the monograph may be obtained from the Chairman of the Committee of Revision.

*Epinephrina.*—A new test for purity is added. Dissolve 1 Gm. of Epinephrine, dried to constant weight over sulfuric acid, in 15 cc. of half-normal hydrochloric acid: the solution is clear. Add to this solution sufficient half-normal hydrochloric acid to make a volume of 20 cc. at 25° C. The specific rotation $[\alpha]_D$ of this solution at 25° C., and using a 200-mm. tube, with sodium light, is not less than −50° and not more than −53.5°.

*Erythritylis Tetranitras Dilutus.*—A new admission. A copy of the monograph may be obtained from the Chairman of the Committee of Revision.

*Fluoresceinum Solubile.*—A new admission. A copy of the monograph may be obtained from the Chairman of the Committee of Revision.

*Gelatinum.*—In the place of the statement that a solution of Gelatin forms a firm, transparent or translucent jelly on standing for several hours at 6° C., there is introduced a new test for jell strength. Place 0.1 Gm. of Gelatin, accurately weighed, in a test-tube about 150 mm. in length and having an internal diameter of 15 mm., and add enough distilled water to make the mixture measure exactly 10 cc. at 25° C. Place a stirring rod in the tube and allow it to stand, with occasional stirring, for six hours. Place the tube in a bath of boiling water and stir until the Gelatin is completely dissolved and the solution thoroughly mixed. At once remove the stirring rod, stopper the tube tightly and allow it to stand in a refrigerator over night. Place the tube in a bath of ice water for thirty minutes, then allow the temperature of the bath to rise slowly. When the temperature of the bath reaches 10° C. the jelly does not flow when the test-tube is laid on its side.

The test for arsenic has been modified. Heat 15 Gm. of Gelatin with 60 cc. of dilute, arsenic-free hydrochloric acid (1 in 4) in a covered flask until all insoluble matter is flocculated and the Gelatin dissolved. Add an excess of bromine T.S. (about 15 cc.), neutralize with ammonia T.S, add 1.5 Gm. of sodium phosphate and allow to cool. Add a slight excess (about 30 cc.) of magnesia mixture T.S., allow to stand for one hour, filter and wash with 5 10-cc. portions of ammonia T.S., diluted with 3 volumes of water. Drain the precipitate well and dissolve it in dilute arsenic-free hydrochloric acid (1 in 4) to a volume of exactly 50 cc. Subject 5 cc. of this solution to the test for *arsenic*. The stain, if any, is not more intense than that produced in a test made with similar quantities of the same reagents and 1.5 cc. of the standard arsenic test solution.

*Glycerinum.*—The carbonization test with sulfuric acid is standardized in terms of color.

*Gossypium Purificatum.*—The test for fatty matter has been amended by prescribing extraction in a Soxhlet apparatus. The limit of fatty matter is unchanged, but it is directed that the ethereal solution may have no blue, green or brownish color.

*Histaminæ Phosphas.*—A new admission. A copy of the monograph may be obtained from the Chairman of the Committee of Revision.

*Hydrargyri Succinimidum.*—A new admission. A copy of the monograph may be obtained from the Chairman of the Committee of Revision.

*Iodophthaleinum.*—A new admission. A copy of the monograph may be obtained from the Chairman of the Committee of Revision.

*Lactosum.*—No changes have been made over those announced for the interim revision official January 1, 1934, except that it is directed to add 0.2 cc. of ammonia T.S. to the solution used for determination of the specific rotation.

*Linimentum Camphoræ.*—The assay for camphor is conducted by volatilizing the camphor in a current of carbon dioxide.

*Linimentum Chloroformi.*—An assay has been introduced for this liniment and for Spiritus Chloroformi. For details see JOUR. A. PH. A., 22, 540–544 (1933). 100 cc. of the Liniment contains, in each 100 cc., not less than 40 Gm. and not more than 45 Gm. of $CHCl_3$.

*Liquor Cresolis Saponatus* (*Liquor Cresolis Compositus U. S. P. X*).—The assay has been amended by substituting a saturated solution of calcium chloride for the solution of sodium chloride previously used for washing the recovered cresol. The cresol is then dried over anhydrous calcium chloride (No. 4 mesh) instead of ignited potassium carbonate.

*Liquor Epinephrini Hydrochloridi.*—The use of an approved preservative is authorized.

*Liquor Ergosterolis Irradiati.*—A new admission. A copy of the monograph may be obtained from the Chairman of the Committee of Revision.

*Liquor Formaldehydi.*—Bromthymol blue T.S. is introduced as the indicator for the determination of acidity and in the assay.

*Liquor Histaminæ Phosphatis.*—A new admission. A copy of the monograph may be obtained from the Chairman of the Committee of Revision.

*Liquor Parathyroidei.*—A new admission. A copy of the monograph may be obtained from the Chairman of the Committee of Revision.

*Liquor Pituitarii Posterioris* (*Liquor Pituitarii U. S. P. X*).—An approved preservative may be added.

*Mel.*—The method for the determination of ash has been modified. Weigh accurately about 10 Gm. of Honey into a platinum dish, add a few drops of olive oil to prevent spattering, heat carefully until swelling ceases and ignite not above dull redness until a white ash is obtained: not more than 0.3 per cent of ash remains.

*Merbaphenum.*—A new admission. A copy of the monograph may be obtained from the Chairman of the Committee of Revision.

*Methylthioninæ Chloridum.*—Methylthionine Chloride contains, when dried to constant weight at 110° C., not less than 98.5 per cent of $C_{16}H_{18}N_3ClS$.

The test for zinc is modified to detect copper as well. Heat 0.5 Gm. of Methylthionine Chloride at a temperature below a red heat until it is completely carbonized, boil the powdered residue with 10 cc. of diluted nitric acid for five minutes, filter and wash the residue with 10 cc. of distilled water. Boil the combined filtrate and washings with 1 cc. of nitric acid, add an excess of ammonia T.S. and filter if necessary: the liquid remains clear upon the addition of an equal volume of hydrogen sulfide T.S. (*copper* or *zinc*).

*Assay.* Place about 0.2 Gm. of Methylthionine Chloride, dried to constant weight at 110° C. and accurately weighed, in a 500-cc. volumetric flask and dissolve it in 100 cc. of distilled water. Add 50 cc. of sodium acetate solution (1 in 10) and mix thoroughly, then add from a burette 50 cc. of tenth-normal iodine, keeping the mixture in constant rotation. Stopper the flask and allow the mixture to stand for fifty minutes, shaking it vigorously at intervals of ten minutes. Add distilled water to make the mixture measure 500 cc., mix thoroughly, allow to stand for ten minutes and filter through a filter that has not been previously moistened. Reject the first 30 cc. of filtrate. Determine the excess of iodine by titration of 100 cc. of the subsequent filtrate with tenth-normal sodium thiosulfate. Each cc. of tenth-normal iodine is equivalent to 0.005328 Gm. of $C_{16}H_{18}N_3ClS$.

*Neoarsphenamina.*—The rubric is amended by requiring not less than 19 per cent and not more than 22 per cent of As.

Some modifications of the tests for identity are introduced.

A new test for purity is added. Expose the ampuled product to a temperature of 56° C. for forty-eight hours: it should show no marked change in color, consistency or solubility.

*Neocinchophenum.*—A new admission, replacing Cinchophenum. A copy of the monograph may be obtained from the Chairman of the Committee of Revision.

*Oleum Amygdalæ Expressum.*—In the test for *various foreign oils*, it is now directed to cool the liberated fatty acids to 15° C. and allow to stand for thirty minutes without stirring.

The solidification point of the fatty acids is fixed at not less than 9° and not more than12° C.

*Oleum Chaulmoogræ.*—The definition is changed to read: The fixed oil expressed from the ripe seeds of *Taraktogenos Kurzii* King, *Hydnocarpus Wightiana* Blume or *Hydnocarpus an-*

*thelmintica* Pierre (Fam. *Flacourtiaceæ*). The fixed oil expressed from the ripe seeds of other species of *Hydnocarpus* (Fam. *Flacourtiaceæ*) when designated as such and when comforming with the description, physical properties and tests for identity and purity prescribed below, may be used.

The minimum free acidity has been deleted, and the maximum reduced to 40 cc. of tenth-normal alkali for 10 Gm. of oil.

A new test for purity has been added. Place 25 cc. of Chaulmoogra Oil in a measuring tube consisting of a glass-stoppered, pear-shaped bulb of not less than 100 cc. capacity, joined at its lower, tapering end to a tube about 30 cm. long, graduated to 25 cc. in divisions of 0.1 cc. Add 100 cc. of neutralized alcohol and shake the mixture thoroughly for not less than ten minutes. Allow the tube to stand for twenty-four hours and observe the volume of the lower layer. Its volume is not less than 23.5 cc. (*free fatty acids* or *castor oil*).

The lower limit of iodine value has been reduced from 98 to 93.

*Oleum Gossypii Seminis.*—The solidification point of the fatty acids has been fixed as not less than 28° and not more than 35° C.

*Oleum Iodatum.* (*Iodized Oil*).—A new admission. A copy of the monograph may be obtained from the Chairman of the Committee of Revision.

*Oleum Lini.*—The color test for rosin or rosin oil has been corrected. Warm 10 cc. of Linseed Oil with an equal volume of acetic anhydride in a test-tube until solution is effected: allow the mixture to cool, then separate the lower anhydride layer and filter it through a small filter moistened with acetic anhydride. Place 2 or 3 drops of the filtrate on a white porcelain surface and add 1 drop of sulfuric acid: a violet color is not produced in the mixture.

*Oleum Maydis.* (*Corn Oil*).—A new admission. A copy of the monograph may be obtained from the Chairman of the Committee of Revision.

*Oleum Morrhuæ and Oleum Morrhuæ Non-Destearinatum.*—The corrected monographs for these have already appeared as interim revisions of U. S. P. X.

*Oleum Olivæ.*—The free fatty acids in 10 Gm. of oil require for neutralization not more than 5 cc. of tenth-normal alkali.

In the test for peanut oil the volume of 90 per cent alcohol used to dissolve the dry fatty acids is increased from 50 cc. to 60 cc.

The range of iodine value is changed from 79 to 88.

The solidification point of the fatty acids is from 17° to 26° C.

*Oleum Theobromatis.*—The specific gravity is changed to from 0.858 to 0.864 at $\frac{100°}{25°}$ C.

The range of iodine value becomes 35 to 40.

The solidification point of the fatty acids is from 45° to 50° C.

*Pancreatinum.*—The assay for starch digestive power has been modified. Determine the percentage of moisture in potato starch by drying about 0.5 Gm., accurately weighed, at 120° C. for four hours. Thoroughly mix a quantity of the starch equivalent to 3.75 Gm. of dry starch, with 10 cc. of cold distilled water. Add the mixture with constant stirring to 75 cc. of distilled water, previously heated to from 50° to 60° C., contained in a tared 250-cc. beaker. Rinse the remaining starch into the beaker with 10 cc. of distilled water, heat the mixture to boiling and boil it gently with constant stirring, for five minutes, or until a translucent, uniform paste is obtained. Add enough distilled water to make the mixture weigh 100 Gm., cool the paste to 40° C. and place the beaker in a water-bath maintained at 40° C. Suspend 0.15 Gm. of Pancreatin in 5 cc. of distilled water and add the suspension to the starch paste, mixing it well by pouring the mixture from beaker to beaker for thirty seconds, noting the time when the Pancreatin suspension was added to the starch. Maintain the mixture at a temperature of 40° C. for exactly five minutes. At once add 0.1 cc. of this mixture to a previously made mixture of 0.2 cc. of tenth-normal iodine and 60 cc. of distilled water at a temperature of from 23° to 25° C.; no blue, red or violet color is produced.

*Paraffinum.*—In place of the test with cold sulfuric or nitric acid, a carbonization test with sulfuric acid is introduced. Pour 5 cc. of Paraffin, at a temperature just above its melting point, and 5 cc. of sulfuric acid, into a glass-stoppered cylinder, which has been previously rinsed with sulfuric acid and heat in a water-bath at 60° C. for ten minutes, shaking the mixture at intervals of one minute: the paraffin remains unchanged in color, and the acid does not become darker than pale amber.

*Paraldehydum.*—The congealing point has been raised to not less than 11° C.

In place of the potassium hydroxide test for aldehyde there has been substituted the following: Place 100 cc. of distilled water in a 300-cc. Erlenmeyer flask, add 5 cc. of Paraldehyde and shake the mixture gently until solution is complete. Add 5 cc. of a solution of hydroxylamine hydrochloride (made by dissolving exactly 3.5 Gm. of hydroxylamine hydrochloride in enough distilled water to make 100 cc. of solution). Shake the mixture gently for thirty seconds, add 2 drops of methyl orange T.S. and titrate immediately with half-normal sodium hydroxide. Perform a blank determination with 5 cc. of the hydroxylamine hydrochloride solution added to 100 cc. of distilled water; the difference between the two titrations does not exceed 1 cc. of half-normal sodium hydroxide (*acetaldehyde*).

*Pepsinum.*—Pepsin digests not less than 3000 and not more than 3500 times its weight of egg albumen.

*Assay.* Mix 35 cc. of normal hydrochloric acid with 385 cc. of distilled water. Dissolve 0.1 Gm. of Pepsin in 150 cc. of this acid. Likewise dissolve 0.1 Gm. of Reference Pepsin in another portion of 150 cc. of this dilute acid. Immerse one or more hen's eggs in boiling water during fifteen minutes. Cool them rapidly to room temperature by immersion in cold water, remove the shell and pellicle and all of the yolk and at once rub the albumen through a clean, dry, No. 40 sieve, rejecting the first portion that passes through the sieve. Place 10 Gm. of the succeeding well-mixed portion in each of three wide-mouth bottles of about 100 cc. capacity. Immediately add 35 cc. of the dilute acid at one time or in portions and, by suitable means, disintegrate thoroughly the particles of albumen. Place the bottles in a water-bath at 52° C After the contents of the bottles have reached that temperature, add exactly 5 cc. of the acidulated solution of Pepsin to one bottle, 4.30 cc. of the same solution and 0.70 cc. of the dilute acid to another bottle, and exactly 5 cc. of the acidulated solution of Reference Pepsin to the third bottle. At once stopper the bottles securely, invert them three times and maintain them at a temperature of 52° C. for two and one-half hours, agitating the contents equally every ten minutes by inverting the bottles once. Remove the bottles from the bath, pour the contents into 100-cc. conically shaped measuring vessels, having diameters not exceeding 1 cm. at the bottom, and graduated from the tip to the 1.0-cc. mark in 0.05-cc. divisions and from the 1.0-cc. to the 5.0-cc. mark in 0.1-cc. divisions, and having the internal taper as nearly identical as possible. Transfer the undigested egg albumen which adheres to the sides of the bottles to the respective measuring vessels with the aid of small portions of distilled water until 50 cc. has been used for each. Mix the contents of each measuring vessel and allow them to stand for thirty minutes. The volume of the undissolved albumen in the measuring vessel corresponding to the 5.0 cc. of the solution of Pepsin being assayed shall not be more than the volume of the undissolved albumen in the measuring vessel corresponding to the 5.0 cc. of the Reference Pepsin solution, and the volume of the undissolved albumen in the measuring vessel corresponding to 4.30 cc. of the solution of Pepsin being assayed shall not be less than the volume of the undissolved albumen in the measuring vessel corresponding to the 5.0 cc. of the Reference Pepsin solution.

Reference Pepsin may be obtained from the Chairman of the Committee of Revision.

*Petrolatum.*—The carbonization test with sulfuric acid has been standardized. The concentration of acid used must be between 94.5 and 95.5 per cent of $H_2SO_4$, determined by titration. See JOUR. A. PH. A., 22, 956–961 (1933).

*Phenacaine.*—A new admission. A copy of the monograph may be obtained from the Chairman of the Committee of Revision.

*Phenobarbitalum.*—The tests for identity have been modified.

The carbonization test with sulfuric acid has been standardized in terms of color.

*Phenobarbitalum Solubile.*—A new admission. A copy of the monograph may be obtained from the Chairman of the Committee of Revision.

*Phenolphthaleinum.*—The melting point is fixed at not below 258° C., an increase of 2°.

*Physostigminæ Salicylas.*—The carbonization test with sulfuric acid is standardized in terms of color.

*Pilocarpinæ Nitras.*—The carbonization test with sulfuric acid is standardized in terms of color.

*Procainæ Hydrochloridum.*—The carbonization test with sulfuric acid is standardized in terms of color.

*Pulvis Chiniofoni.*—A new admission. A copy of the monograph may be obtained from the Chairman of the Committee of Revision.

*Quinidinae Sulfas.*—The carbonization test with sulfuric acid has been standardized in terms of color.

*Quinina.*—The carbonization test with sulfuric acid has been standardized.

*Quininae Bisulfas.*—The carbonization test with sulfuric acid has been standardized.

*Quininae Dihydrochloridum.*—The carbonization test with sulfuric acid has been standardized.

*Quininae et Ureae Hydrochloridum.*—The carbonization test with sulfuric acid has been standardized.

*Quininæ Sulfas.*—The dihydrate replaces the heptahydrate as the official form. The official solubility figures are changed as a result.

The loss in weight on drying at 100° C. must not exceed 5 per cent.

The carbonization test with sulfuric acid is standardized.

*Resina.*—The definition has been changed to read: Rosin is a solid resin obtained from *Pinus palustris Miller*, and from other species of *Pinus* (Fam. *Pinaceæ*). This will admit rosin produced by the so-called steam-solvent process, if it complies in other respects with the monograph.

*Saccharinum* (*Glusidum U. S. P. X*).—The carbonization test with sulfuric acid has been standardized.

*Santoninum.*—The carbonization test with sulfuric acid has been standardized.

*Sapo Durus* (*Sapo U. S. P. X*).—The definition has been altered to read simply "Soda Soap." The monograph has been so amended as to apply only to soaps that have the chemical and physical characteristics of a soap produced by the saponification of olive oil with sodium hydroxide. It is well known that soaps having these characteristics may be produced from other than olive oil, and that there are no chemical tests that will satisfactorily distinguish such soaps from an olive oil soap. It has therefore seemed the part of wisdom for the Pharmacopœia to recognize such a condition and provide a workable rather than a useless definition.

The caustic alkalinity or free acidity in 2.5 Gm. of the soap, determined in the alcoholic extract, requires for neutralization not more than 0.2 cc. of tenth-normal acid or alkali, using phenolphthalein T.S. as the indicator. The carbonate alkalinity, determined in the alcohol-insoluble residue, requires not more than 2 cc. of tenth-normal acid for neutralization, using methyl orange T.S. as the indicator.

When the fatty acids are separated from the soap solution by acidifying, washing and drying, their solidifying point is not less than 18° and not more than 23° C., their acid value is not less than 185 and not more than 205, and their iodine value is not less than 83 and not more than 92.

*Sapo Mollis.*—The soap may be made with potassium hydroxide exclusively, if desired.

Soft soap must contain not more than 0.25 per cent of caustic alkali calculated as potassium hydroxide, when determined by titration of the alcoholic extract from 5 Gm. of Soap with tenth-normal sulfuric acid, using phenolphthalein T.S. as the indicator.

The alcohol insoluble residue from the same sample will require, for neutralization, when dissolved in water, not more than 2.5 cc. of tenth-normal sulfuric acid, using methyl orange T.S. as the indicator (*carbonate alkalinity*).

The acid value of the liberated fatty acids is not less than 190 and not more than 205, and the iodine value is not less than 170.

*Sodii Cacodylas.*—The permissible free acidity in 2 Gm. has been reduced to an equivalent of 0.5 cc. of tenth-normal sodium hydroxide.

*Spiritus Æthylis Nitritis.*—This is assayed iodometrically, as already described. The assay is performed upon 10 cc. of the Spirit, which is not previously shaken with powdered potassium bicarbonate, and the weight of sample taken is calculated from its specific gravity at 25° C. Each cc of tenth-normal sodium thiosulfate is equivalent to 0.007505 Gm. of $C_2H_5NO_2$.

*Spiritus Camphoræ.*—Because of the admission of synthetic camphor, which is optically inactive, it has been necessary to introduce a chemical assay. Accurately measure 25 cc. of Spirit of Camphor into a 300-cc. Erlenmeyer flask, and add slowly, with constant shaking, 75 cc. of dinitrophenylhydrazine T.S. (a solution of 1.5 Gm. of dinitrophenylhydrazine in 100 cc. of 1 in 10

sulfuric acid). Connect the flask with a reflux condenser and heat on a water-bath for four hours. Allow the mixture to cool, add 200 cc. of dilute sulfuric acid (1 in 50), and set the mixture aside for twenty-four hours. Transfer the precipitate to a previously dried and weighed Gooch crucible and wash with 10-cc. portions of cold distilled water until the last washing is not acid to litmus paper. Continue the suction until the excess water is removed, and dry the crucible and precipitate to constant weight at 80° C. The weight of the precipitate, multiplied by 0.458, equals the weight of camphor in 25 cc. of the Spirit of Camphor taken for the assay.

*Spiritus Chloroformi.*—An assay has been introduced. For details see JOUR. A. PH. A., 22, 540–544 (1933).

*Spiritus Frumenti.*—The limit of acidity has been changed. A 25-cc. portion should require not less than 2 cc. and not more than 6 cc. of tenth-normal sodium hydroxide for neutralization.

The limit for esters, using the method of U. S. P. X, is now not less than 2 cc. nor more than 8 cc. of tenth-normal sodium hydroxide.

Mercuric sulfate T.S. is now used as the reagent for acetone, replacing sodium nitroprusside, as described under Alcohol.

Slight modifications have been made in the details of the other tests for impurities.

*Spiritus Glycerylis Nitratis.*—A new assay is given. Transfer 25 cc. of Spirit of Glyceryl Trinitrate to a previously weighed, 50-cc. volumetric flask, stopper the flask and weigh accurately. Add 3 cc. of an aqueous solution of sodium hydroxide (1 in 5), re-stopper the flask and allow it to stand at room temperature for one hour. Then add sufficient aldehyde-free alcohol to make the total volume measure 50 cc., stopper and mix thoroughly. Assay 20 cc. of this solution according to the method for the assay of nitrites. One cc. of tenth-normal sodium thiosulfate is equivalent to 0.0113 Gm. of glyceryl trinitrate.

*Spiritus Vini Vitis.*—Tests for purity are based upon those found under Spiritus Frumenti.

*Strychninæ Nitras.*—The carbonization test with sulfuric acid has been standardized.

*Strychninæ Sulfas.*—Strychnine Sulfate loses not more than 11.5 per cent of its weight upon drying at 100° C.

The carbonization test with sulfuric acid has been standardized.

*Styrax.*—A test for rosin and rosin oil is introduced. Triturate about 2 Gm. of Storax with 25 cc. of petroleum benzin in a small beaker for five minutes. Filter the mixture, and place 10 cc. of the filtrate in a dry test-tube. Add 5 cc. of dilute sulfuric acid (made by mixing equal volumes of sulfuric acid and distilled water and cooling the mixture), shake it vigorously, and allow the mixture to settle. Add acetic anhydride, drop by drop: the mixture exhibits no violet or purple band.

*Tabellæ Glycerylis Trinitratis.*—A new admission. A copy of the monograph may be obtained from the Chairman of the Committee of Revision.

*Theophyllina.*—The carbonization test with sulfuric acid has been standardized.

*Theophyllina cum Æthylenediamina.*—A new admission. A copy of the monograph may be obtained from the Chairman of the Committee of Revision.

*Theophyllina cum Sodii Acetate.*—A new admission. A copy of the monograph may be obtained from the Chairman of the Committee of Revision.

*Thyroideum.*—A detailed description of the appearance of the powder under the microscope has been added.

Thyroid contains not more than 6 per cent of moisture, determined by the toluene distillation method.

The limit of ash has been removed, to permit the use of sodium chloride as a preservative.

The assay directions have been elaborated, see JOUR. A. PH. A., 24, 742–748 (1935).

*Tryparsamidum.*—A new admission. A copy of the monograph may be obtained from the Chairman of the Committee of Revision.

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If trade be a calling in which material goods are sold and a profession, one in which knowledge is sold—and this seems to be one essential difference between them—then I am sure that the professional side of pharmacy is fated greatly to increase in this country (Great Britain). —SIR FREDERICK GOWLAND HOPKINS.

# HOUSE OF DELEGATES, AMERICAN PHARMACEUTICAL ASSOCIATION

## ABSTRACTS OF THE MINUTES OF THE SESSIONS HELD IN MULTNOMAH HOTEL, PORTLAND, ORE., AUGUST 5–10, 1935.

The First Session of the House of Delegates was convened by Chairman Rowland Jones, Jr., at 1:30 P.M., Tuesday, August 6, 1935; he welcomed the delegates present. The roll call showed that a quorum was present and the House of Delegates was declared organized for business.

The names of delegates and organizations represented follow. The name of the organization or state is in Italics, names of delegates in capitals and small capitals, and the names of voting delegates in bold face.

*The minutes of the House of Delegates are printed here, and to avoid duplication in printing will also answer for the reports of the transactions made to the General Sessions—the reports are abstracts of the minutes.*

The names of the delegates follow:

### A. PH. A. SECTIONS.

*Scientific*—**L. W. Rowe,** Detroit, Mich.
*Education and Legislation*—**George C. Schicks,** Newark, N. J.; O. E. RUSSELL, Elkhart, Ind.; L. W. RISING, Seattle, Wash.
*Practical Pharmacy and Dispensing*—**Ralph W. Clark,** Madison, Wis.
*Historical*—LOUIS GERSHENFELD, Philadelphia, Pa.; **C. O. Lee,** La Fayette, Ind.; JOHN T. LLOYD, Cincinnati, O.
*Commercial Interests*—**Henry Brown,** Scranton, Pa.
*Conference of Pharmaceutical Association Secretaries*—**Charles J. Clayton,** Denver, Colo.
*Conference of Pharmaceutical Law Enforcement Officials*—**Joseph P. Murray,** Colorado Springs, Colo.; LINN E. JONES, Portland, Ore.; WALTER F. MEADS, Des Moines, Iowa.
*Plant Science Seminar*—**F. H. Eby,** Philadelphia, Pa.; C. E. MOLLETT, Missoula, Mont.
*National Conference on Pharmaceutical Research*—**George D. Beal,** Pittsburgh, Pa.; W. J. HUSA, Gainesville, Fla.; JOHN C. KRANTZ, JR., Baltimore, Md.

### A. PH. A. BRANCHES.

*Baltimore*—**John C. Krantz, Jr.,** J. GILBERT JOSEPH.
*Chicago*—**Lawrence Templeton,** W. B. DAY, E. N. GATHERCOAL, C. M. SNOW, I. A. BECKER, WILLIAM GRAY.
*Cincinnati*—**F. H. Freericks,** BERNARD KOTTE, C. G. MERRELL.
*Detroit*—**H. M. Whitney,** L. W. ROWE, R. T. LAERY.
*New York*—**Hugo H. Schaefer,** H. V. ARNY, JOSEPH ROSIN.
*North Pacific*—**Frank Nau,** FREDERICK GRILL, EARL GUNTHER.
*Northern New Jersey*—**R. W. Rodman,** ERNEST LITTLE, G. C. SCHICKS.
*Northern Ohio*—**Edward Spease,** F. J. BACON.
*Philadelphia*—AMBROSE HUNSBERGER, **F. H. Eby,** F. P. STROUP.
*Pittsburgh*—**C. Leonard O'Connell,** LOUIS EMANUEL.

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*American Drug Manufacturers Association*—**F. E. Bibbins,** Indianapolis, Ind.; F. O. TAYLOR, Detroit, Mich.
*National Association Boards of Pharmacy*—**C. Thurston Gilbert,** Noroton, Conn.; C. S. PIERCE, Springvale, Me.; R. C. SHULTZ, Worland, Wyo.; J. M. ROBERTSON, Phoenix, Ariz.
*National Association of Retail Druggists*—**Harvey A. Henry,** Los Angeles, Calif.; JOHN WITTY, Portland, Ore.; GEORGE L. SECORD, Chicago, Ill.; JOHN W. DARGAVEL, Chicago, Ill.
*National Wholesale Druggists*—**H. J. Frank,** Portland, Ore.; C. H. CARTRIDGE, Seattle, Wash.; C. F. OSMERS, Tacoma, Wash.
*Proprietary Association*—**Samuel T. Helms,** Baltimore, Md.; P. I. HEUISSLER, Baltimore, Md.; G. F. REDDISH, St. Louis, Mo.; J. F. HOGE, New York City.

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*Massachusetts*—**Timothy S. Shea.**
*Michigan*—**C. F. Allan,** B. S. PECK, M. N. HENRY, E. E. DURHAM, JOSEPH BURNIAC.
*Mississippi*—**Elmer L. Hammond.**
*Missouri*—**Arthur F. Schlichting.**
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*Ohio*—**F. H. Freericks,** M. NILE FORD, EDWARD SPEASE.
*Oklahoma*—**E. E. Duncan,** R. W. BEEGLE, LLOYD HARRIS, W. D. PATTERSON, NED MILLIGAN, D. B. R. JOHNSON.
*Oregon*—GEORGE HAACK, **Walter Rhodes.**
*Pennsylvania*—**Henry Brown,** C. LEONARD O'CONNELL, F. H. EBY, F. P. STROUP.
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*South Carolina*—W. H. ZEIGLER, **E. T. Motley.**
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*Wisconsin*—**Sylvester H. Dretzka,** RALPH W. CLARK.
*Wyoming*—**R. C. Shultz.**

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S. L. Hilton, H. V. Arny, H. C. Christensen, W. D. Adams, J. H. Beal, R. P. Fischelis, George D. Beal, E. F. Kelly, E. G. Eberle, A. G. DuMez, Rowland Jones, Jr.

FRATERNAL DELEGATES.

*Brooklyn College of Pharmacy*—Robert S. Lehman, Fred C. A. Schaefer.
*Philadelphia College of Pharmacy and Science*—E. F. Cook, F. P. Stroup.

In the absence of Vice-Chairman Williams, former Chairman P. H. Costello was requested to take the chair while Chairman Jones read his address, which was under the by-laws referred to the Committee on Resolutions. See pages 708–715, August Journal A. Ph. A. Chairman Jones announced the appointment of the following Committees.

**Committee on Resolutions:** *Chairman*, R. L. Swain, Maryland; E. R. Serles, South Dakota; George C. Schicks, New Jersey; F. E. Bibbins, Indiana; Roy B. Cook, West Virginia; L. L. Walton, Pennsylvania; M. N. Ford, Ohio; A. L. I. Winne, Virginia; Walter D. Adams, Texas.

**Committee on Nominations:** *Chairman*, R. C. Wilson, Georgia; Frank Nau, Oregon; Herbert Parker, Arkansas; John C. Krantz, Jr., Maryland; H. C. Christensen, Illinois; Arthur D. Baker, Colorado; Hugo Schaefer, New York; Frank Mortensen, California; W. H. Hankins, Florida.

Chairman R. C. Wilson stated that the Committee on Nominations would be glad to have suggestions from any of the members in regard to nominees, and will be glad to have them come before the Committee at its first meeting at 3:00 P.M., on Wednesday, in the Empire Room of the Multnomah Hotel.

Chairman Jones announced as the next order of business the reading of the annual report of the Council by Secretary E. F. Kelly.

ANNUAL REPORT OF THE COUNCIL TO THE HOUSE OF DELEGATES, 1934–1935.

The Council membership consisted of nine elected members, J. H. Beal, C. E. Caspari, C. H. LaWall, H. V. Arny, H. C. Christensen, W. D. Adams, H. A. B. Dunning, S. L. Hilton and W. Bruce Philip, and eight ex-officio members, President Fischelis, Vice-Presidents Geo. D. Beal and Oscar Rennebohm, Secretary Kelly, Treasurer Holton, Editor Eberle, Editor DuMez and Chairman of the House of Delegates, Rowland Jones, Jr.

The Council has supervision of the property, funds and publications of the Association and acts for the Association and the House of Delegates in the interim between meetings.

The business presented to the Council during the year was unusual in scope and importance. It was transacted at a meeting of the Council in Washington, at two meetings of its Executive Committee, on July 17th and January 5th, and the actions of which were confirmed by the Council, and at a meeting of the Council in Portland which began on Saturday, August 3rd, and by mail. Twenty-one Council Letters covering 68 pages and submitting 110 items of business and 39 motions were sent to the members of the Council. All of these Letters have been published in the Journal.

The Council organized at a meeting on Friday, May 11, 1934, in the Shoreham Hotel, Washington, D. C., following the last General Session of the Association, and elected S. L. Hilton, *Chairman;* J. H. Beal, *Vice-Chairman;* and E. F. Kelly, *Secretary*. E. G. Eberle was elected *Editor* of the Journal and A. G. DuMez *Editor* of the Year Book.

Chairman Hilton appointed the Council Committees on Finance, on Property and Funds, on Publications, on Standard Program and on the Year Book, and was authorized to appoint an Executive Committee of the Council, should the occasion arise.

The Council elected S. C. Henry a member of the Commission on Proprietary Medicines and W. J. Husa and Geo. D. Beal members of the Committee on Pharmaceutical Research for terms of five years in each case.

As the president was not prepared to submit his appointments, he was authorized to make such appointments as are now provided for, to fill vacancies as they may occur, and to make additional appointments as may be necessary or advisable during the year.

As the balance in the Headquarters Building Fund was not sufficient to meet all expenses for the building, landscaping, approach, furniture and equipment, the proper officers of the Association were authorized to borrow $40,000.00 from the Maryland Trust Company at 4% interest and with Chairman Dunning's endorsement, and the loan was paid in full on December 31, 1934. through additional collections.

The first meeting of the Executive Committee was held in the AMERICAN INSTITUTE OF PHARMACY on July 17th, with the full membership present—Fischelis, Hilton, Arny, Dunning, DuMez, Eberle, Holton, Kelly, LaWall and Philip.

It was decided that all papers presented before the Sections be submitted in duplicate and the request of the Section on Practical Pharmacy and Dispensing that fifty dollars be added to its budget for use in collecting and correlating propaganda which has been employed to promote professional pharmacy, was approved.

As the Reading Room of the AMERICAN INSTITUTE OF PHARMACY had been equipped in honor of the late Franklin M. Apple to the extent of the funds bequeathed by him, it was ordered that the Apple Fund, amounting to $1607.05, be transferred to the Headquarters Building Fund.

Chairman Dunning submitted, in detail, the plans for securing a maintenance fund and for possible additions to the building and to its equipment. The subject was discussed at length during which details of the future plans of the ASSOCIATION in connection with the AMERICAN INSTITUTE OF PHARMACY were given careful consideration. Each member of the Council was requested to submit in written form his ideas for the activities to be undertaken in the INSTITUTE in addition to those already announced.

The following subjects were also considered:

"Proposed merger of the AMERICAN PHARMACEUTICAL ASSOCIATION and National Association of Retail Druggists as advocated by a number of state pharmaceutical associations; proposed federation of state associations and possible affiliation of such federation with the national associations; proposed consolidation of dues of national and state associations; possibility of organizing certain surveys and other activities in the AMERICAN INSTITUTE OF PHARMACY if funds are provided from outside sources; status of the AMERICAN INSTITUTE OF PHARMACY in relation to the AMERICAN PHARMACEUTICAL ASSOCIATION; proposed plan for a Council of Pharmaceutical Practice as advocated by Professor Cook; study of state codes; study of laws pertaining to the sale of drugs and medicines with the possibility of suggesting a model state law; possibility of enlisting support of the American Bar Association in studies of pharmaceutical legislation; plans for increasing the membership of the ASSOCIATION; better coördination of the programs and activities of sections of the ASSOCIATION and local branches; food and drug legislation; and program for the annual meeting.

"It was decided to request the special committee of the Council appointed to study the proposed plan for a Council on Pharmaceutical Practice to arrange for a meeting at an early date for the purpose of discussion and making definite recommendations to the Council."

The invitation of the Executive Committee of the National Association of Retail Druggists to the Council to meet jointly during the N. A. R. D. meeting was accepted, and arrangements were made for attendance of members of the Council.

In October, A. O. Mickelsen of Portland, Oregon, was elected *Local Secretary* and later the Multnomah Hotel was selected as the headquarters and the week of August fifth as the time, for the Eighty-Third Annual Meeting.

At the annual joint meeting of the Council and the Executive Committee of the N. A. R. D. the Council was represented by J. H. Beal, W. D. Adams, W. Bruce Philip and E. F. Kelly. The agenda of the meeting included the proposed consolidation or federation of the two associations, the proposed federation of the state associations, a more effective plan of coöperation between the two associations, federal food and drug legislation, U. S. P. and N. F. Publicity, and National Pharmacy Week. The decision was to appoint a joint committee to effect a better relation and to coöperate in dealing with the important questions referred to. Later, E. F. Kelly, R. P. Fischelis and R. L. Swain were approved as the representatives of the AMERICAN PHARMACEUTICAL ASSOCIATION.

The contract for printing and binding the YEAR BOOK, Volume 22, was awarded to the Lord Baltimore Press, Baltimore, Md., and for printing and mailing the JOURNAL for 1935 to the Mack Printing Company, Easton, Pa.

The Special Committee on the Proposed Council on Pharmaceutical Practice held a meeting in Washington on August 18th, and later submitted a report recommending the establishment of a Council on Pharmaceutical Practice to be conducted under the auspices of the A. PH. A. with certain objectives as outlined and with a membership of nine consisting of the chairmen of the U. S. P. and N. F. Committees of Revision, a representative each from the A. A. C. P. and the

N. A. B. P., and a retail, a hospital and a government pharmacist, with the president and secretary of the A. PH. A. as ex-officio members. An advisory committee representing twelve organizations in the public health field was also recommended. The recommendations were approved and the special committee continued for the purpose of developing the plan and presenting a more perfected plan at this meeting.

In December, the Committee on Finance submitted an extensive report on receipts and expenditures for 1934 and an estimate of receipts amounting to $35,800.00 for the calendar year 1935, with a budget of expenses amounting to $35,580.00, which were approved. The Committee recommended that the policy of strict economy be continued for 1935, especially because of the expenses of revision of the N. F. and the R. B. and the inclusion of Pharmaceutical Abstracts for 1935 in the JOURNAL beginning with the March issue.

W. Albert Johnson of Baltimore, who has served since 1922, was selected to audit the accounts of the ASSOCIATION for 1934. His report was published in the May issue of the JOURNAL and the Treasurer's report will be published in full later. A summary of his report for 1934 will be included in the Treasurer's report to be given later in this session.

During the year, the late Dr. Frederick B. Kilmer left a bequest of $3000.00 as a trust fund, the income from which is to be given as a prize for meritorious work in Pharmacognosy, and Dr. J. H. Beal gave $1000.00 to the Endowment Fund. Special gifts for the AMERICAN INSTITUTE OF PHARMACY will be reported by Chairman Dunning of the Committee on Maintenance.

The second meeting of the Executive Committee of the Council was held on January 5th, with all members present. Vice-Chairman J. H. Beal and Former-President R. L. Swain were present by invitation.

Messrs. Fischelis, Kelly and Swain, as the AMERICAN PHARMACEUTICAL ASSOCIATION representatives on the A. PH. A.-N. A. R. D. Joint Committee, reported on the sessions of the meeting held in Washington on December 5, 1934, at which the following unanimous agreements were reached:

1. That the proposal to consolidate the A. PH. A. and the N. A. R. D. was disposed of for the present by a formal resolution adopted by the N. A. R. D. at its recent meeting in New Orleans.

2. That, although the proposal for some form of affiliation between the two associations did not appear to be practical under the existing conditions and in view of the apparent need for separate organizations to deal with the professional and economic problems of pharmacy, an effective plan of coöperation should be worked out.

3. That some practical plan of federating the State Associations with the A. PH. A. and the N. A. R. D. more closely than is now the case is necessary.

4. That the Committee favors the further consideration of the suggestion that a plan be worked out for federating the State Associations with both National Associations by providing that members of each State Association become automatically members of the National Associations on a single membership fee plan.

Arrangements were made for a meeting of the Joint Committee early in January preferably on the 8th, to further develop the plan to which representatives from the Conference of Pharmaceutical Association Secretaries, representing the State Associations, will be invited.

5. With respect to Pharmacy Week:

(*a*) That the A. PH. A. should take the leadership and should appoint the Committee on Pharmacy Week, including several representative members of the N. A. R. D.

(*b*) That the two Associations should award a joint certificate to the ten best window displays after the first award.

(*c*) That the annual appropriations of $250.00 each from the A. PH. A. and N. A R. D. be continued and increased as rapidly as possible.

(*d*) That as many carefully selected advertisers as possible be requested to give a definite time for Pharmacy Week on the radio and to provide them with a program.

6. That the A. PH. A. should direct U. S. P. and N. F. Publicity and that it should collect information about the work being done in the various states and work out a standard plan for promoting the use of official preparations.

7. That First Aid Week should be directed by the N. A. R. D. and that the A. PH. A. should assist in so far as possible.

The report was received and the representatives were authorized to coöperate in the investigation and consideration of any proposed plan for the federation of state and national associations on a single membership fee or otherwise for submission to the respective associations.

The work of the Committee on Maintenance was reported on by Chairman Dunning and carefully considered by the Committee. It was agreed to provide for a special committee on Library and a special committee on Museum to study the development of these divisions of the INSTITUTE and to submit plans with respect to each.

The relation of the A. PH. A. to the National Trade Conference was discussed at length but no change in the present status was decided upon nor other action taken.

The Committee on Publications submitted an extensive report on the progress of revision of the N. F. and R. B. and on the plans for publishing Pharmaceutical Abstracts and other material heretofore appearing in the YEAR BOOK in the JOURNAL. It was decided, (*a*) to set the retail price of the N. F. VI at $5.00 per copy in cloth binding and at $7.00 in interleaved leather and the price of the Pharmaceutical Recipe Book II at $5.00 per copy in cloth binding; (*b*) to approve the selection of Mrs. Elsie Kassner as editor of the Recipe Book; (*c*) to hold a meeting of certain members of the Committee on Recipe Book to hasten revision; (*d*) that on account of expense and the small amount of space in the JOURNAL, it was not practical to publish the report outlining proposed changes in the N. F. VI; (*e*) to publish the Pharmaceutical Abstracts for 1935 and other YEAR BOOK material in monthly issues of the JOURNAL beginning in March, in forms of 32 or more pages, separately numbered and indexed, and (*f*) that the YEAR BOOK, Volume 22, for 1933, be issued as promptly as possible.

Relations of the A. PH. A. with the National Retail Drug Code Authority on which the secretary was the temporary representative and of which he was the secretary-treasurer, was considered at length. It was decided that the secretary should be relieved of this additional work as promptly as arrangements could be made now that the work of the Authority was well organized and that he should serve in an advisory capacity. Later, Mr. W. S. Elkins, Jr., was elected *Executive Secretary* of the Code Authority and served in that capacity until June 15, 1935, when the Code Authority was discontinued.

The meeting of the Executive Committee then adjourned.

Oliver A. Farwell of Detroit, Mich., submitted his resignation as a member of the Committee on National Formulary on account of his retirement, and E. Wirth, School of Pharmacy, University of Illinois, Chicago, was elected to serve the unexpired term on the recommendation of Chairman Gathercoal.

In May, the General Program of the Portland meeting was submitted by the Committee on Standard Program, through the secretary, and it was later approved.

The important changes suggested in the tentative program for the 1935 meeting are:

(*a*) The meeting of the Council heretofore held on Monday has been scheduled for the Saturday preceding. The object is to avoid the conflict with the sessions of the A. A. C. P. and the N. A. B. P. on Monday and to provide time for the uninterrupted consideration of the important business to come before the Council. It is understood that the meeting of the Council will be continued on Sunday if necessary.

(*b*) Provision is made for a Joint Meeting of the Council and the Executive Committee of the N. A. R. D. on Wednesday afternoon, August 7th.

(*c*) Meetings of the Committees on Nominations and on Resolutions are scheduled in order that those who may desire to appear before these Committees will have the opportunity to do so.

(*d*) The Third Session of the House of Delegates is scheduled for Friday afternoon rather than on Friday morning and the short Final Session of the House heretofore held just prior to the Final General Session on Friday evening is omitted, since the change above mentioned makes the short session unnecessary. Under the proposed arrangement, the sessions of the Sections will be completed by noon on Friday and all resolutions and actions requiring consideration by the House of Delegates can be acted upon at the Friday afternoon session. In addition, time will be available to prepare the final report of the House for consideration at the Final General Session.

The contract for printing and binding the Recipe Book II was awarded to the Mack Printing Company, Easton, Pa., which firm had the contracts for the U. S. P. XI and N. F. VI, and of-

fered to accept that for the Recipe Book on the same price basis as that for the N. F. VI with necessary increases for the advanced cost of paper, of binding and electrotypes and of printing.

The Council was officially advised that the property of the ASSOCIATION in Square 62, Washington, D. C., had been exempted from taxes by the Commissioners of the District of Columbia as on January 1, 1934, said exemption to continue so long as the property is used for its present purposes.

At the second meeting of the Council, held in Portland, annual reports were received from the Committees on Finance, on Property and Funds, on Publications, on National Formulary, on Recipe Book, on YEAR BOOK and on Standard Program, and from the Commission on Proprietary Medicines. These reports covered the activities of the ASSOCIATION during the year with respect to its property funds and publications and they were given careful consideration by the Council in a forenoon, afternoon and evening session. The reports and the actions taken on them will appear in full in an early Council Letter to appear in the JOURNAL.

The publications of the ASSOCIATION were given special attention. The revisions of the National Formulary and Recipe Book are now nearing completion with the expectation that the new editions will be issued later in the year. The abstracts of pharmaceutical literature for 1935 are being published in the JOURNAL and with the issuance of Volume 23 either this fall or early in 1936, the YEAR BOOK will be discontinued. These changes open the way for the issuance of a popular publication in addition to the JOURNAL, as soon as this is possible.

These important developments will be dealt with in the President's Address.

Steps were taken toward the publication of the recently completed monograph on Aconite and it is expected that other monographs of interest and value to pharmacy may follow. Plans are also under way for the publication of a revision of the Professional Pharmacy, which it is believed will make the publication of greater assistance to the practicing pharmacist. The first edition evidently proved to be of value since ten thousand copies of it have been disposed of.

The Council nominated D. M. R. Culbreth to the House of Delegates for election as Honorary President for 1935–1936; E. F. Kelly for Secretary; and C. W. Holton for Treasurer. These nominations are being submitted in a separate letter.

During the year, 273 members were elected and Dr. C. A. Rojahn of Germany was elected an Honorary Member.

E. F. Kelly, R. P. Fischelis and R. L. Swain were continued as the representatives of the ASSOCIATION on the A. PH. A.-N. A. R. D. Joint Committee.

(Signed) E. F. KELLY, *Secretary*.

On motion of F. H. Freericks, the report was received and referred to the Committee on Resolutions, seconded by W. H. Porterfield; carried.

Chairman Jones called for the report of the Treasurer as the next order of business. This was read by Secretary Kelly. It follows.

REPORT OF THE TREASURER OF THE AMERICAN PHARMACEUTICAL ASSOCIATION, JANUARY 1 TO JUNE 30, 1935.

| *Current Funds:* | Jan. 1, 1935. | June 30, 1935. |
|---|---|---|
| Savings and Checking Accounts | $ 2,557.40 | $ 2,183.92 |
| Secretary's Account | 1,638.61 | 1,638.61 |
| Total | $ 4,196.01 | $ 3,822.53 |
| *Permanent Funds:* | | |
| Endowment | $ 15,764.00 | $ 17,020.73 |
| Centennial | 5,926.44 | 6,013.59 |
| Ebert Legacy | 8,604.82 | 8,760.76 |
| Ebert Prize | 1,087.38 | 1,063.18 |
| Life Membership | 35,588.83 | 33,694.83 |
| Endowed Membership | 128.40 | 128.40 |

| | | |
|---|---|---|
| Research | 65,953.77 | 67,030.63 |
| Headquarters Building, Bonds and Cash | ..... | 15,034.56 |
| Headquarters Building, Property and Equipment | 547,453.63 | 535,796.07 |
| Total | $680,507.27 | $684.542.75 |
| *Trust Funds:* | | |
| Procter Monument | $ 17,896.76 | $ 18,213.55 |
| Remington Honor Medal | 1,317.39 | 1,342.01 |
| Total | $ 19,214.15 | $ 19,555.56 |
| *Summary of Funds:* | | |
| Current | $ 4,196.01 | $ 3,822.53 |
| Permanent | 680,507.27 | 684,542.75 |
| Assets | 684,703.28 | 688,365.28 |
| Trust | 19,214.15 | 19,555.56 |
| Total | $703,917.43 | $707,920.84 |

SCHEDULE OF DEPOSITS, SECURITIES AND PROPERTY.

| | | |
|---|---|---|
| *Deposits:* | | |
| Baltimore National Bank | $ 10,676.07 | |
| Merchants and Newark Trust Co | 1,770.24 | |
| Boston Penny Savings Bank | 426.68 | |
| Baltimore Trust Co | 6,317.22 | |
| Maryland Trust Co | 14,834.56 | |
| Total | | $ 34,024.77 |
| *Securities:* | | |
| Liberty Bonds, 4th issue, 4¼% | $ 17,400.00 | |
| Treasury Bonds, 2⅞% | 18,500.00 | |
| Federal Farm Mortgage Corporation Bonds, 3% | 1,000.00 | |
| State of Illinois Bonds, 4% | 6,000.00 | |
| State of Massachusetts Bonds, 3% | 14,000.00 | |
| State of North Carolina Bonds, 4½% | 7,000.00 | |
| State of Tennessee Bonds, 4½% | 3,000.00 | |
| City of Baltimore Bonds, 4% | 40,000.00 | |
| City of Chattanooga Bonds, 4½% | 8,000.00 | |
| City of Dallas Bonds, 4½% | 11,000.00 | |
| City of Detroit Bond, 4% | 1,000.00 | |
| City of Newark Bonds, 4% | 6,000.00 | |
| City of Patterson Bond, 4¼% | 1,000.00 | |
| Town of Montclair Bonds, 4¼% | 4,000.00 | |
| Chicago, Milwaukee, St. Paul & Pacific R. R. Co. Bonds, 5% | 200.00 | |
| Total | | $138,100.00 |
| *Property:* | | |
| Lots 3, 4, 5, 16, 17, 801, 802, 806, 807 in Square 62, Washington, D. C., Building and Equipment | | $535,796.07 |
| Total | | $707,920.84 |

Of the securities listed above, only 1-$1000 bond of the City of Detroit (in Life Membership Fund) has failed to pay interest to the amount of $40.00. As of October 15, 1934 and April 15, 1935, $20,800 Liberty Loan Bonds, 4th issue, 4¼%, were called and were replaced with Treasury Bonds, 2⅞%, with the exception of $3000.00 transferred from the Life Membership Fund to the Current Fund and $100.00 each from the Endowment, Centennial and Research Funds which were converted into cash.

The property entry represents the actual cost of the site, the landscaping, the Building, the approach and the equipment, less the mortgage of $36,400.00 on Lot 7 which it was necessary to purchase in order to acquire the other property required. Approximately $1750.00 is due on deferred payments.

On May 10, 1935, the property of the ASSOCIATION was formally exempted from general taxes by action of the Board of Commissioners of the District of Columbia as of January 1, 1934, the date the property was occupied, such exemption to continue so long as the property is used for its present purposes. The Chairman of the Committee on Maintenance will give further details in his annual report.

On account of the closing of Water Street between 22nd and 23rd Streets and the transfer of property between the United States of America and the ASSOCIATION, in accordance with Public Resolution No. 18, signed May 1932, and as set out in Council Letter No. 3, 1932–1933, see JOURNAL, A. PH. A., Oct. 1933, pages 1058 to 1065, it became necessary to renumber certain of the lots in Square 62 as shown on the plot plan printed on page 1063.

The parts of Lots 12, 13, 14, 15 and 17 transferred to the United States as shown in red on the plan, are now numbered Lot 805. The remainder of these lots is now numbered Lot 806. The property transferred to the ASSOCIATION by the United States as shown in yellow on the plan and comprising part of the bed of Water Street and part of U. S. Reservation No. 332 B, is numbered Lot 807. The order of exemption, therefore, covers all of the property owned by the AMERICAN PHARMACEUTICAL ASSOCIATION.

The Secretary's report will show receipts from Dues, the JOURNAL, the National Formulary, Recipe Book, YEAR BOOKS, Proceedings, Bulletins, Badges and Bars, Buttons and Pins, and Miscellaneous Items, which are collected by him and deposited in the Secretary's account in the Baltimore National Bank. These receipts are transferred by check, accompanied by itemized deposit slips, to the ASSOCIATION's checking account in the Merchants and Newark Trust Company from which all budget expenses are paid by voucher check.

The report of the Treasurer for the calendar year 1934 was audited by W. Albert Johnson, the auditor approved by the Council, and his report was published in the JOURNAL for May 1935, page 426. A summary of the Treasurer's report for 1934 is given in this report and the full report will be published later in the JOURNAL.

CHARLES W. HOLTON, *Treasurer.*

On motion, duly seconded, the report was received.

Chairman Jones called for the report of the Secretary as the next order of buisness. It follows.

### REPORT OF THE SECRETARY.

May 1, 1934 to June 30, 1935.

The last annual meeting was held in May on account of the dedication of the AMERICAN INSTITUTE OF PHARMACY and, therefore, the ASSOCIATION year covered by this report was an unusually long one. A special effort has been made to provide for complete reports by the officers, committees and delegates of the ASSOCIATION at this meeting and to avoid repetition, this report will be limited, as far as possible, to matters not covered in other reports and to matters which require additional comment.

During the preceding ASSOCIATION year, emphasis was placed upon the completion of the building and upon the arrangements for its dedication in so far as the ASSOCIATION officers were concerned. During this year, major attention has been given to the occupancy of the building, to the completion of the landscaping and planting, to the equipment of the building, to the inventory and insurance of furniture and equipment, to arrangements for the maintenance of the building and grounds, to the preliminary development of the Library and Museum, to the neces-

sary re-adjustment of the accounting system, and to securing exemption from taxation. This necessary and very important work might be referred to as a consolidation of our position and it is a great satisfaction to state that it is now practically completed. The home which the ASSOCIATION has looked forward to for so many years is now a growing concern which can operate within its income and we are now prepared to proceed with the development and extension of its functions. As previously stated, we have been exceedingly fortunate in the attitude of those government officials interested in our project and in the helpful advice and guidance they have so freely given us. They have strongly advised that we proceed carefully, even slowly, in the future development of the AMERICAN INSTITUTE OF PHARMACY. We now occupy a key position which will, because of its surroundings and because of the plans for the further development of the area, become increasingly valuable and increasingly influential for pharmacy and for the ASSOCIATION. The professional and scientific standing of the ASSOCIATION and of its related organizations had been given added recognition by the government in the exemption of its property from taxation.

The act of Congress legalizing the ownership of the property limits the occupancy of the building and the tax exemption is to be continued so long as the property is used for the present purposes. It is, therefore, necessary to keep these limitations clearly in mind in planning the future activities of the ASSOCIATION.

The ASSOCIATION, at the Baltimore meeting, by resolution, decided upon the associations and organizations which were to occupy the building. The government officials have known of and approved this action; at the meeting last year, the National Association Boards of Pharmacy decided to move its headquarters to the building and it is hoped that the American Association of Colleges of Pharmacy will soon take similar action since it is important that the work of the three related organizations shall be coördinated as closely and as promptly as possible. A decision also has an evident relation to the development of additional divisions of the ASSOCIATION. Furthermore, the ASSOCIATION's office is now called upon to do work in which it should have the advice and coöperation of the other associations. Every effort should be made to concentrate in the AMERICAN INSTITUTE OF PHARMACY all of the organizations and agencies interested in professional and scientific pharmacy. Otherwise, it will become necessary in the interest of efficiency and progress for the ASSOCIATION to create somewhat parallel divisions to those already in existence.

The publications of the ASSOCIATION have also required unusual attention from the office of the ASSOCIATION during the year. The Committee on Publications, the Committee on National Formulary and the Committee on Recipe Book will report the details and it is sufficient here to mention only the outstanding facts.

The contracts for printing and binding the N. F. VI and the R. B. II and the contracts for their distribution and sale have been worked out and awarded. The four contracts have been awarded to the Mack Printing Company of Easton, Pa., on the basis of their bids and the same firm has the contracts for the U. S. P. XI. The manufacture and distribution of these three valuable publications are, therefore, concentrated, and as the result the savings effected and the increased return will enable the ASSOCIATION to expand this important phase of its work and to render a greater service to the public as well as to pharmacy.

The office has also been called on to give considerable attention to the completions of the revisions of the N. F. and R. B. which will undoubtedly bring greater credit to the ASSOCIATION. The issuance of the revisions sometime before January first will also enable the ASSOCIATION to arrange for the partial concentration of the work of revision in the building, and it is believed with considerable saving in operation.

Volume 22 of the YEAR BOOK covering 1933, has just been issued and it is expected that Volume 23 covering 1934, will be issued in the fall. If so, the YEAR BOOKS will be completed. Beginning with the March issue, the material for 1935 heretofore appearing in the YEAR BOOKS has appeared monthly in the JOURNAL bringing this service up-to-date, and thereby increasing its value to pharmacy and to our members. This work has meant an extra call on the finances of the ASSOCIATION and marks the completion of the first two steps in its plans for its publications and opens the way for the third step which is to issue a more popular professional publication intended for wider distribution and to bring the services of the ASSOCIATION more directly to the pharmacists of the nation. Plans for the popular publication are already under way.

The question of the continued participation of the ASSOCIATION in the work of the National Retail Drug Code Authority, which was to be decided at this meeting, was fortunately or unfortu-

nately settled by a previous decision. Your secretary, as is well known, served as the A. PH. A. representative on the Code Authority and as the secretary-treasurer of that body during its existence. During part of the time, he also acted as its executive secretary. These duties added greatly to his work and to an extent interfered with his ASSOCIATION work. The Code Authority maintained a separate office and provided its own office force and the secretary was given every consideration and assistance possible toward lessening the pressure. There was, and very naturally, a question as to wisdom of the active participation of this professional and scientific association in an effort principally intended to relieve the economic and commercial situation of the retail druggist. It must be evident, however, that professionally the pharmacist is in a good position while, economically, the druggist is in an unsound if not a precarious position, and that the further improvement and even the maintenance of our professional position is considerably dependent upon whether and in what manner the economic situation can be improved. At least, the A. PH. A. has made a contribution to the solution of the problem and has demonstrated that while it is principally concerned with professional and scientific pharmacy, it is in no sense indifferent to the economic problems of the pharmacist, and apparently with no damage to its professional standing.

*The 1934 Meeting.*—The principal addresses and the proceedings of the Council appeared in the May issue of the JOURNAL; the proceedings of the General Sessions, the House of Delegates, the N. A. B. P. and the A. A. C. P. in the June issue; and the proceedings of the Sections and Conferences in the July issue. The papers and other communications have appeared in succeeding issues. Although the proceedings were more voluminous, the JOURNAL gave a complete report within three months after the meeting.

The resolutions were furnished promptly to the state and national associations, to boards of pharmacy, to the schools and colleges and to the pharmaceutical publications, and compliance with the request that support given to those resolutions of joint interest was more general than heretofore.

We are further indebted to the pharmaceutical press for the interest and support given our work during the meetings and throughout the year. Greater space is given to professional pharmacy each year and the necessity for its practice is more generally emphasized.

It is important, however, that the delegates of each state and national association submit a report on the A. PH. A. meeting at the annual meeting of their respective associations. Such reports should be devoted to a general explanation of the work of the ASSOCIATION and the accomplishments of the annual meeting.

*The 1935 Meeting.*—It has been difficult to carry on arrangements for the annual meeting at such a distance and in a section in which the ASSOCIATION has not visited. Local Secretary Mickelsen, Chairman Haack and their associates deserve great credit from their visitors for the time and thought and effort they have so cheerfully and effectively contributed.

We are also indebted to the officers and members of the Pharmaceutical Associations of Oregon, Washington and Idaho for their interest in our meeting and their coöperation in arranging for the Tri-State Meeting in Portland during this week. This is an innovation and one which should have consideration in arranging for our meetings in other sections, especially those at a distance. We are also indebted to the pharmacists in other neighboring states who have visited us in such numbers and have coöperated toward the success of this meeting.

Mention is due to the individuals, firms and associations who have contributed in one way or another to the success of this occasion. The Local Committee has or will pay credit to them by name.

*The General Program.*—The Committee on General Program will report on the changes which have been made for this meeting. The principal changes are the meeting of the Council beginning on Saturday and the elimination of the short session of the House of Delegates before the final General Session.

Otherwise, the program is in general as heretofore. We have suggestions for additional sections from hospital pharmacists, government pharmacists and employee pharmacists which indicates an increased interest on the part of these groups. Our program is now so full, however, that the needs of special groups will probably have to be taken care of through the creation, if necessary, of sub-sections of those sections now operating rather than by new sections.

*Pharmacy and the Government.*—A further step in the recognition of pharmacy by the Na-

tional Government during the year has been the transfer of the pharmacists from the sub-professional to Grade One of the Professional and Scientific Service in the Veterans Administration. Because of the economy orders, the transfer does not give all of these pharmacists the advantage of the salary of this grade but the salary will be available later when the order is withdrawn. Arrangements are being made to work with a committee of pharmacists from this service toward broadening the service which pharmacy can render as their further promotion in grade will depend to some extent on a broadened service.

As the Committee on Pharmacy Corps will report, several conferences have been held with the Surgeon General of the Army and the question at issue now has narrowed itself to whether pharmacists shall be commissioned in the Medical Auxiliary Corps or in a separate Pharmacy Corps, which represents great progress from the time when the question of commissioning pharmacists seemed doubtful.

Three bills were voluntarily introduced in Congress by Representatives McSwain, Evans and Johnson providing for commissioned rank for pharmacists in the Army and Navy which is a further recognition of the changed attitude on this question and on the necessity to improve the pharmaceutical service in these two services.

On the other hand, government officials and representatives are calling on the A. PH. A. for service more frequently and the INSTITUTE OF PHARMACY is becoming recognized as the source of information on all matters relating to pharmacy.

Such service and information as we can furnish will emphasize the value of pharmacy and in several instances we have been requested to furnish briefs and papers showing the work which pharmacy does and its value as a public health profession.

*American Association for the Advancement of Science.*—The A. PH. A. has been affiliated with this ASSOCIATION and with its Section N—Medical Sciences—since 1926 and has been represented in its Council by one Councilor. Because of the increase in members of the A. PH. A. who have joined the A. A. A. S., the A. PH. A. has this year become entitled to two Councilors, which increase places pharmacy on an equal basis with the other public health professions. Dr. John C. Krantz, Jr., has served as Councilor for several years and Professor Gustave Bachman was appointed this year.

Early this year arrangements were completed to divide Section N into three sub-sections to be known as 1 N—Medicine, 2 N—Dentistry and 3 N—Pharmacy, and that at the meetings each subsection should hold a meeting in addition to the meetings of the whole section. The meeting of 3 N—Pharmacy at the recent Minneapolis meeting was a gratifying success in attendance and in the character of the program.

The position which pharmacy now holds in this most representative scientific association through the A. PH. A., provides further recognition of its professional standing and also a splendid opportunity to illustrate the contributions that pharmacy makes to the advancement of science in this country.

*The State and National Pharmaceutical Association.*—The relations of the A. PH. A. with these organizations grow closer and more coöperative each year. Although it has not been possible for an officer to attend each meeting of the state and national associations, the A. PH. A. has been officially represented at most of them.

The A. PH. A. office is called on more and more frequently for some service by the state and national associations and it is very encouraging to have the calls increase. As the reference library and other divisions in the building develop, we hope to be of greater service.

*Local and Student Branches.*—Although no new branches have been established during the year, most of those listed have carried on successfully during the year and have materially assisted the ASSOCIATION in its work. Inquiries about student branches have recently been received from three schools and it is hoped that with the improvement in conditions, branches will soon be established in every school and college.

*Membership.*—As previously reported the ASSOCIATION has during the depression and at their request, carried a number of members who could not pay dues promptly. A considerable proportion of those in arrears were able to pay during the year either wholly or partially. Those who found it impossible to pay have been removed from the roll and we are now almost back on the old basis. This has resulted in the removal of 612 names during the year. In addition, 42 members have died and 21 have resigned.

During the year, two hundred and sixty-four members have been elected, 154 during the present calendar year.

The membership at present is approximately 3200 of whom 181 are Life Members and 24 Honorary Members. The report of the Committee on Membership will outline the plans for increasing the membership in the near future.

*Receipts of the Secretary's Office and the Sales of the N. F. and R. B.*—Attached are financial statements of the receipts from January 1 to June 30, 1935, from Dues, Bulletins, Proceedings, YEAR BOOKS, Badges and Bars, Buttons and Pins, and Miscellaneous Items. Remittances to the Treasurer and the balance on hand are also set out.

The attached reports also give detailed information in reference to the printing, binding and sale of the National Formulary and the Pharmaceutical Recipe Book.

The Secretary's annual financial report for the calendar year 1934 was submitted with that of the Treasurer, and audited as provided for in the By-Laws.

SUMMARY OF RECEIPTS AND REMITTANCES, SECRETARY'S OFFICE, JANUARY 1 TO JUNE 30, 1935.

*Receipts by Secretary.*

| | | |
|---|---|---|
| Balance on deposit January 1, 1935 | | $ 1,638.61 |
| Dues: | | |
| Membership only | $ 116.00 | |
| Membership and JOURNAL, 1932 | 20.00 | |
| Membership and JOURNAL, 1933 | 47.00 | |
| Membership and JOURNAL, 1934 | 423.00 | |
| Membership and JOURNAL, 1935 | 4918.88 | |
| Membership and JOURNAL, 1936 | 60.00 | |
| Membership and JOURNAL, 1937 | 5.00 | |
| | $5589.88 | |
| JOURNAL | 4230.04 | |
| National Formulary | 1000.06 | |
| Recipe Book | 339.16 | |
| YEAR BOOKS | 2021.53 | |
| U. S. P.-N. F. Prescription Ingredient Survey | 13.75 | |
| Leaflet No. 14 | 11.00 | |
| American Conference on Hospital Service (Return of Dues) | 100.00 | |
| Total Receipts | | 13,305.42 |
| Total Balance and Receipts | | $14,944.03 |

*Remittances to Treasurer.*

| | | |
|---|---|---|
| Jan. 26, 1935, Check No. 168 | $2021.45 | |
| Feb. 2, 1935, Check No. 169 | 2275.73 | |
| March 7, 1935, Check No. 170 | 1916.32 | |
| March 16, 1935, Check No. 171 | 1195.06 | |
| March 30, 1935, Check No. 172 | 1247.87 | |
| Apr. 25, 1935, Check No. 173 | 1100.24 | |
| May 15, 1935, Check No. 174 | 622.35 | |
| June 3, 1935, Check No. 175 | 1231.99 | |
| June 21, 1935, Check No. 176 | 770.76 | |
| June 29, 1935, Check No. 177 | 923.65 | 13,305.42 |
| Balance on Deposit | | $ 1,638.61 |

RECEIPTS AND DISBURSEMENTS ON ACCOUNT NATIONAL FORMULARY, JANUARY 1 TO DECEMBER 31, 1934.

*Receipts.*

| | | |
|---|---|---|
| Sales for quarter ending March 1, 1934, N. F. V | $1327.20 | |
| Sales for quarter ending June 1, 1934, N. F. V | 538.12 | |
| Sales for quarter ending September 1, 1934, N. F. V | 801.60 | |
| Sales for quarter ending December 1, 1934, N. F. V | 1975.09 | |
| Sales for year, N. F. I and III | 4.85 | |
| Sales for year, Bulletins N. F. VI | 55.50 | |
| Sales for year, Notes on N. F. | 17.00 | |
| Use of Text | 10.00 | |
| Total Receipts | | $ 4,729.36 |

*Disbursements.*

N. F. V:

| | | |
|---|---|---|
| L. A. Engel Press, Printing | $ 3.50 | |
| Mack Printing Co., Printing and Binding | 571.25 | |
| N. F. Display, Exhibits at A. M. A. Meeting | 100.00 | |

N. F. VI:

| | | |
|---|---|---|
| E. N. Gathercoal, General and Traveling Expenses | 626.62 | |
| Mrs. L. E. Barnett, Clerical Services | 22.40 | |
| Miss Edith Smith, Clerical Services | 511.60 | |
| Huniston-Keeling Co., Supplies | 19.57 | |
| Samuelson Duplicating Co., Bulletins, etc. | 879.62 | |
| Glenn L. Jenkins, Committee Expense | 210.20 | |
| H. A. Langenhan, Committee Expense | 11.95 | |
| Adley B, Nichols, Committee Expense | 20.33 | |
| H. B. Gilpin Co., Supplies | 6.43 | |
| Pilcher-Hamilton Daily Co., Binders, etc. | 127.75 | |
| Md. Pharm. Assoc., Reprints | 13.55 | |
| Gaw-O'Hara Envelope Co., Envelopes | 73.53 | |
| JOURNAL, A. PH. A., Reprints | 2.66 | |
| Mack Printing Co. | 87.43 | |
| Nat'l. Confer. Pharm. Research, Membership | 25.00 | |
| E. P. Douglas, Printing | 38.42 | |
| K. M. Wright Studios, Picture of Display | 3.60 | |
| Ray Adamson, Research | 33.75 | |
| R. E. Terry, Expenses N. F. Exhibit at St. Paul | 12.55 | |
| Total Disbursements | | $ 3,401.71 |

RECEIPTS AND DISBURSEMENTS ON ACCOUNT NATIONAL FORMULARY, JANUARY 1 TO JUNE 30, 1935.

*Receipts.*

| | | |
|---|---|---|
| Sales quarter ending March 1, 1935, N. F. V | $ 834.86 | |
| Sales quarter ending June 1, 1935, N. F. V | 110.40 | |
| Sales of Notes, N. F. VI | 9.80 | |
| Sales of Bulletins, N. F. VI | 45.00 | |
| Total Receipts | | $ 1,000.06 |

*Disbursements.*

| | | |
|---|---|---|
| N. F. V: | | |
| Mack Printing Co. | $1053.54 | |
| N. F. VI: | | |
| E. N. Gathercoal, General and Traveling Expenses | 427.28 | |
| Samuelson Duplicating Co., Bulletins, etc. | 409.15 | |
| Pilcher-Hamilton-Daily Co., Binders and Paper | 63.75 | |
| S. L. Hilton, Expenses | 1.55 | |
| E. P. Douglas, Printing | 18.36 | |
| Miss Edith Smith, Clerical Services | 450.00 | |
| Miss Florence I. Otis, English Correction | 200.00 | |
| Adley B. Nichols, Traveling Expenses | 37.27 | |
| Mack Printing Co. | 72.43 | |
| Pioneer Publishing Co., Printing | 16.73 | |
| Total Disbursements | | $ 2,750.06 |

SUMMARY OF RECEIPTS AND DISBURSEMENTS ON ACCOUNT OF N. F., JANUARY 1, 1926, TO JUNE 30, 1935.

| | *Receipts.* | *Disbursements.* |
|---|---|---|
| 1926 | $ 45,318.21 | $20,958.56 |
| 1927 | 17,460.75 | 8,389.38 |
| 1928 | 14,565.15 | 3,560.41 |
| 1929 | 12,718.40 | 3,556.60 |
| 1930 | 9,940.05 | 6,123.32 |
| 1931 | 8,271.00 | 3,702.38 |
| 1932 | 4,243.27 | 2,087.20 |
| 1933 | 3,957.36 | 4,231.01 |
| 1934 | 4,729.36 | 3,401.77 |
| 1935 (to June 30) | 1,000.06 | 2,750.06 |
| Totals | $122,203.61 | $58,760.69 |

SUMMARY OF SALES OF N. F. V—JANUARY 1 TO DECEMBER 31, 1934.

| Quarter Ending. | Binding. | Copies. | Price. | Amount. | Rec'd by Secretary. |
|---|---|---|---|---|---|
| Mar. 1, 1934 | Buckram | 553 | $2.40 | $1327.20 | |
| | Leather | 0 | | | $1327.20 |
| June 1, 1934 | Buckram | 225 | $2.40 | $ 540.00 | |
| | Leather | 1 | 4.80 | 4.80 | |
| | Less freight and postage | | | 6.68 | $ 538.12 |
| Sept. 1, 1934 | Buckram | 334 | $2.40 | $ 801.60 | |
| | Leather | 0 | | | $ 801.60 |
| Dec. 1, 1934 | Buckram | 832 | $2.40 | $1996.80 | |
| | Leather | 0 | | | |
| | Less freight and postage | | | 21.71 | $1975.09 |
| Total Sales for 1934 | | | | | $4642.01 |

SUMMARY OF SALES OF N. F. V—JANUARY 1 TO JUNE 30, 1935.

| Quarter Ending. | Binding. | Copies. | Price. | Amount. | Rec'd by Secretary. |
|---|---|---|---|---|---|
| Mar. 1, 1935 | Buckram | 352 | $2.40 | $ 844.80 | |
| | Leather | 0 | | | |
| | Less drayage | | | 9.94 | $ 834.86 |
| June 1, 1935 | Buckram | 42 | $2.40 | $ 100.80 | |
| | Leather | 2 | $4.80 | 9.60 | $ 110.40 |
| Total Sales for 1935 | | | | | $ 945.26 |

SUMMARY OF COPIES OF N. F. V PRINTED AND BOUND TO JUNE 30, 1935.

| Series. | Buckram. | Leather. | Total. |
|---|---|---|---|
| A | 19,561 | 500 | 20,061 |
| B | 10,023 | ... | 10,023 |
| C | 5,000 | ... | 5,000 |
| D | 5,000 | ... | 5,000 |
| E | 5,000 | ... | 5,000 |
| F | 4,479 | ... | 4,479 |
| G | 1,488 | ... | 1,488 |
| | 50,551 | 500 | 51,051 |

SUMMARY OF COPIES OF N. F. V—DISTRIBUTED COMPLIMENTARY, SOLD AND HELD IN STOCK BY J. B. LIPPINCOTT CO., TO JUNE 30, 1935.

| | Buckram. | Leather. | Total. |
|---|---|---|---|
| Copies used in copyrighting and for complimentary distribution through the Mack Printing Co. | 33 | 12 | 45 |
| Copies distributed complimentary through the Chemical Catalog Co. | 32 | ... | 32 |
| Copies sold by the Chemical Catalog Co.* | 18,021 | 70 | 18,091 |
| Copies distributed complimentary through J. B. Lippincott Co. | 23 | ... | 23 |
| Copies sold by J. B. Lippincott Co. | 31,979 | 33 | 32,012 |
| Copies held in stock by J. B. Lippincott Co. | 463 | 385 | 848 |
| | 50,551 | 500 | 51,051 |

SUMMARY OF RECEIPTS AND DISBURSEMENTS, PHARMACEUTICAL RECIPE BOOK.

| | Receipts. | Disbursements. |
|---|---|---|
| 1917 | ..... | $ 10.50 |
| 1918 | ..... | 19.26 |
| 1919 | ..... | ..... |
| 1920 | ..... | 1.40 |
| 1921 | ..... | 23.98 |
| 1922 | ..... | 42.93 |
| 1923 | ..... | ..... |
| 1924 | ..... | 470.70 |
| 1925 | ..... | 572.47 |

* The Chemical Catalog Co. sold 107 copies Leather of which 37 copies were returned by dealers to J. B. Lippincott Co. during quarter ending June 1, 1933.

| | | |
|---|---|---|
| 1926 | ..... | 336.38 |
| 1927 | ..... | 95.08 |
| 1928 | ..... | 766.66 |
| 1929 | $ 5,256.00 | 9,838.65 |
| 1930 | 1,920.98 | 51.00 |
| 1931 | 3,641.80 | 61.96 |
| 1932 | 1,356.64 | ..... |
| 1933 | 894.94 | 130.51 |
| 1934 | 1,428.28 | 690.89 |
| 1935 (to June 30) | 339.16 | 384.10 |
| Total | $14,837.80 | $13,496.47 |

SUMMARY OF SALES OF RECIPE BOOK—JANUARY 1 TO DECEMBER 31, 1934.

| Quarter Ending. | Binding. | Copies. | Price. | Amount. | Rec'd by Secretary. |
|---|---|---|---|---|---|
| March 1, 1934 | Buckram | 94 | $2.78 | $261.32 | |
| | Less postage | | | .22 | $ 261.10 |
| June 1, 1934 | Buckram | 259 | $2.78 | $720.02 | $ 720.02 |
| Sept. 1, 1934 | Buckram | 82 | $2.78 | $227.96 | |
| | Less postage | | | .26 | $ 227.70 |
| Dec. 1, 1934 | Buckram | 79 | $2.78 | $219.62 | |
| | Less postage | | | .16 | $ 219.46 |
| Total | | | | | $1428.28 |

SUMMARY OF SALES OF RECIPE BOOK—JANUARY 1 TO JUNE 30, 1935.

| Quarter Ending. | Binding. | Copies. | Price. | Amount. | Rec'd by Secretary. |
|---|---|---|---|---|---|
| March 1, 1935 | Buckram | 65 | $2.78 | $180.70 | $180.70 |
| June 1, 1935 | Buckram | 57 | $2.78 | $158.46 | $158.46 |
| Total | | | | | $339.16 |

SUMMARY OF COPIES OF RECIPE BOOK PRINTED AND BOUND TO JUNE 30, 1935.

| | Buckram. | |
|---|---|---|
| Series A | 5000 | |
| Series B | 506 | 5506 |

SUMMARY OF COPIES OF RECIPE BOOK DISTRIUBTED COMPLIMENTARY, SOLD AND HELD IN STOCK BY J. B. LIPPINCOTT CO., TO JUNE 30, 1935.

| | | |
|---|---|---|
| Copies distributed complimentary | 101 | |
| Copies sold | 5345 | |
| Copies held in stock | 60 | 5506 |

ACCOUNT OF YEAR BOOKS, PROCEEDINGS, BULLETINS.

| | Sales. | Expenses. |
|---|---|---|
| 1934 | $ 74.18 | $1487.40 |
| 1935 (to June 30) | 2021.53 | 2128.44 |
| Total | $2095.71 | $3615.84 |

E. F. KELLY, *Secretary.*

On motion of William Gray, seconded by F. H. Freericks, the report was accepted.

Chairman Jones announced that items 10, 11 and 12 of the program would be deferred until the Second Session of the House of Delegates.

The First Session of the House of Delegates was then adjourned.

### Second Session.

The Second Session of the House of Delegates was held Wednesday, August 7, at 8:00 P.M. The meeting was called to order by Chairman Rowland Jones. The roll call of delegates was omitted as there were more delegates present than required for a quorum.

Secretary Jones called for reading of the minutes of the First Session of the House of Delegates. This is not repeated as the transactions are printed in this issue of the JOURNAL. On motion of J. G. Beard, seconded by J. Lester Hayman, the minutes were adopted.

The report on the International Pharmaceutical Federation was read by E. G. Eberle and approved.

### INTERNATIONAL PHARMACEUTICAL FEDERATION.

Reference has been made to the program of the International Pharmaceutical Federation in the Report of the Historian. The program of the meeting which was held in Brussels, July 29th and 30th, is published in the July number of the *Bulletin of the Federation*.

A session of the Commission on Specialties was held in Bern, August 1934. The meeting was opened by President Dr. L. Van Itallie, who is an honorary member of our ASSOCIATION. Among the subjects discussed were various determinations and analyses and a resolution was adopted that steps should be taken to secure information from all countries represented in the Federation relative to methods employed and also from various laboratories and establish a central bureau for utilizing the information.

Another informative report published in the *Bulletin* compared certain regulations of different countries governing the practice of pharmacy; the questionnaires included the requirements for practice, preparations that require prescriptions and who is responsible for the regulation of the pharmacy and supervising the practice.

Responses were secured from Australia, Belgium, Czechoslovakia, Egypt, France, Great Britain, Hungary, Poland, Sweden and United States.

Another contribution published in the *Bulletin* was made by Colonel Dr. J. Thomann, of Berne, and related to the Congress of Military Medicine and Pharmacy. The report dealt with the activities of the service. References were made in the report of the Historian and comments have appeared in the JOURNAL OF THE AMERICAN PHARMACEUTICAL ASSOCIATION.

The Twelfth International Congress of Pharmacy (July 30 to August 6, 1935) was organized under the auspices of the International Pharmaceutical Federation, the Belgian National Pharmaceutical Society and the Society of Pharmacy of Antwerp.

The annual report of Secretary T. Potjewijd is published in the July *Bulletin of the Federation*, also the regulations of the International Congress of Pharmacy.—E. G. EBERLE, *Reporter*.

The report of the Council to the American Association for the Advancement of Science from the A. PH. A. was read by Councilor J. C. Krantz, Jr.

### REPORT OF THE COUNCILOR TO THE AMERICAN ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE FROM THE AMERICAN PHARMACEUTICAL ASSOCIATION.

#### Section N, Medical Sciences, N2, Pharmacy.

This section was called to order by Dean Wulling of the School of Pharmacy, University of Minnesota at 10:00 A.M., June 27, 1935, in the Medical Sciences Building of the University of Minnesota. Doctor Wulling outlined in a general way the scope and purpose of the section and introduced the chairman, John C. Krantz, Jr., Councilor to the ASSOCIATION from the AMERICAN PHARMACEUTICAL ASSOCIATION.

One of the most interesting studies presented was the "Penetration of Antiseptics in Living Tissues" by Arthur D. Hirschfelder. He showed by methods of vital staining that many of the commonly employed antiseptics do not penetrate living tissue without producing injury during the course of absorption. Of special interest was the paper presented by Harold N. Wright on the colloidal properties of the arsphenamines. In general, it was shown that the colloidal nature of

the arsphenamine compounds increased their toxicity and diminished their therapeutic efficiency. Earl B. Fischer presented interesting studies on the deterioration of tincture of digitalis and showed how the modern methods of micro-sugar determinations might be used to study the deterioration of the tincture of digitalis as evidenced by the hydrolysis of the glucosides. Heber W. Youngken presented a most thorough microscopical study of the methods of staining and identification of the endocrine powders used in the treatment of disease. In addition, there were interesting papers presented by A. H. Uhl on *Cracca Virginiana* and Gustav Bachman on Boric Acid, Joseph B. Burt on Mercuriated Derivatives of Thymol and Carvacrol and a paper by John C. Krantz, Jr., on the fate of the sugar alcohols in the animal body.

The following titles represent the papers presented: "Studies on the Penetration of Antiseptics in Living Tissues," Arthur D. Hirschfelder and Milan Novak, Department of Pharmacology, School of Medicine, University of Minnesota. "A Study of *Cracca Virginiana L.*," Lawrence F. Madland and Arthur D. Uhl, Department of Pharmaceutical Chemistry, University of Wisconsin. "Colloidal Properties of the Arsphenamines in Relation to Toxicity and Therapeutic Efficiency," Harold N. Wright, Department of Pharmacology, School of Medicine, University of Minnesota. "The Fate of the Sugar Alcohols and Their Anhydrides in the Animal Body," John C. Krantz, Jr., C. Jelleff Carr and Ruth C. Musser, Department of Pharmacology, School of Medicine, University of Maryland. "The Application of the Shaffer-Smogyi Method in the Study of the Deterioration Rate of Tincture of Digitalis and a Physical and Pharmacological Investigation of the Absorption of Glucosidal Complexes Present in Tincture of Digitalis," Earl B. Fischer, R. A. Gortner and Charles H. Rogers, Department of Pharmacy and Biochemistry, University of Minnesota. "The Microscopy of Powdered Desiccated Endocrine Glands," Heber Youngken, Department of Pharmacognosy, Massachusetts College of Pharmacy. "A Physicochemical and Pharmaceutical Contribution to the Solubility of Boric Acid in Water," George Crossen and Gustav Bachman, Department of Dispensing, College of Pharmacy, University of Minnesota. "The Effect of Certain Sugar Alcohols and Their Anhydrides in the Dissociation Constant of Boric Acid," Margarethe Oakley, C. Jelleff Carr and John C. Krantz, Jr., Bureau of Chemistry, State of Maryland Department of Health, and Department of Pharmacology, School of Medicine, University of Maryland. "Some Mercuriated Derivatives of Thymol and Carvacrol," Joseph B. Burt, University of Nebraska.

The meeting was well attended by local pharmacists, members of the staffs of Pharmacy, Pharmacology and Chemistry of the University of Minnesota. Most of the papers presented were discussed at length by those present.

The first definite effort of the AMERICAN PHARMACEUTICAL ASSOCIATION to participate in the meetings of the American Association for the Advancement of Science was made by the councilor at the Boston meeting in the winter of 1933. This program was presented in conjunction with Dentistry. Owing to extremely inclement weather and a lack of appreciation and mutual understanding between the two professions, the section was not very successful. We had not yet found our place in the American Association for the Advancement of Science. Through conferences with Dr. Henry B. Ward, permanent secretary of the organization, and Doctor McKinley of Georgetown Medical School, a definite effort was made to establish a permanent section under N, Medical Sciences, N3 Pharmacy. This has been accomplished. In doing this pharmacy has accomplished:

1. A definite and permanent place among the medical sciences in the American Association for the Advancement of Science.

2. This year's section was as well attended as any of the longer established medical sections.

3. Pharmacy had to make no apology for the scientific character of its program.

4. The councilor recommends the continuance of participation in the American Association for the Advancement of Science programs biennially, and urges the schools in the vicinity of the meeting to support the program with papers. Above all the councilor urges that under no circumstances should the ASSOCIATION compromise with the scientific nature of the program by attempting to make it an applied pharmaceutical presentation.

Respectfully submitted,

JOHN C. KRANTZ, JR., *Councilor* to the American Association for the Advancement of Science from THE AMERICAN PHARMACEUTICAL ASSOCIATION.

On motion, duly seconded, it was accepted.—Motion by T. J. Bradley and seconded. (See Committee on Resolutions, pages 712 and 714.)

Resolutions were presented by the Section on Historical Pharmacy. (See Committee on Resolutions, page 712.)

Resolutions were presented from R. L. Irizary, of the Porto Rico Pharmaceutical Association.

A preliminary report was presented by R. P. Fischelis from the National Drug Trade Conference.

Report was presented from Indiana Pharmaceutical Association by B. V. McCullough and referred to Committee on Resolutions. (See Committee on Resolutions, pages 712 to 713.)

Report was presented by Chairman A. Ziefle for the Committee on Student Branches and referred to Committee on Resolutions. (See Committee on Resolutions, page 711.)

The report of the Committee on Cosmetics was received and referred to the Committee on Resolutions. (See also page 710, Recommendation 16.)

The report of the Committee on National Pharmaceutical Syllabus was presented by Chairman J. G. Beard. It was received and after some discussion by E. R. Serles referred for publication.

REPORT OF THE NATIONAL PHARMACEUTICAL SYLLABUS COMMITTEE.

Your Chairman is unable to report any concrete progress made by him, during the year ending August first. There have been no meetings of the Committee because there has been no need for such meetings. Since the present edition of the Syllabus is only a bit more than three years old, the work at this time must necessarily consist of studies made of educational changes, with a view to incorporating the essence of such changes in the next revision.

Your Chairman agrees with the recommendation adopted by the American Association of Colleges of Pharmacy at the Portland meeting that the next edition of the Syllabus not be issued until after the new Pharmacopœia has been made official and due time has been allowed for consideration of them and that thereafter the revision be semi-annually.

During the past year, seventy-three copies of the Syllabus were sold as compared with forty-one copies during the previous year. However, twelve copies have been distributed, without cost, to foreign organizations who have requested them for study. Incidentally, from these foreign bodies have come some comments which were of a complimentary nature.

The financial report which follows covers the period from May first, 1934 to August first 1935.

| Receipts: | | Disbursements: | |
|---|---|---|---|
| Cash Balance, May 1, 1934 | $207.43 | Postage | $32.00 |
| Contributions | | Stationery | 7.50 |
| A. A. C. P. | $50.00 | Secretarial assistance | 20.00 |
| N. A. B. P. | 50.00 | | |
| A. Ph. A. | 50.00 | Total | $59.50 |
| Sales of 75 copies of Syllabus | 160.75 | | |
| | $518.20 | | |
| | | Balance on hand | $458.70 |

J. G. Beard, *Chairman.*

The report of the Committee on Horticultural Nomenclature was presented by Chairman Heber W. Youngken and referred to Council.

The report of the Committee on Weights and Measures was presented by Chairman P. H. Costello. It was received. (See page 711.)

The report of Chairman James E. Hancock of the Committee on William Procter Memorial Fund was received and referred to the Committee on Resolutions. (See page 714.)

Chairman A. G. DuMez of the Committee on Pharmaceutical Nomenclature reported progress.

The report of the Committee on Pharmacy Week was read by Secretary E. F. Kelly and referred to Council on motion of R. P. Fischelis and H. V. Arny. (See page 714.)

Secretary E. F. Kelly read a communication from Dr. Henry B. Ward, Permanent Secretary of the American Association for the Advancement of Sciences. It was referred to the Committee on Resolutions—see pages 712 and 714.

The report of the Committee on Legislation was called for. Secretary E. F. Kelly stated that he had received no report from Chairman Ambrose Hunsberger.

COUNCIL REPORT.

Secretary E. F. Kelly read a communication from the Council presenting nominations for Honorary President, Honorary Member, Secretary and Treasurer.

On motion, duly seconded, the communication was received, whereupon the names of the nominations were presented and the nominees were elected by unanimous ballot:

*Honorary President*, D. M. R. Culbreth, Baltimore, Md.; *Honorary Member*, C. A. Rojahn, Halle, Germany; *Secretary*, E. F. Kelly, Washington, D. C.; *Treasurer*, Charles W. Holton, Essex Fells, N. J.

The report of the Committee on Nominations was presented by Chairman R. C. Wilson:

For *President*, George D. Beal, Pennsylvania; John Culley, California; Andrew G. DuMez, Maryland. *First Vice-President*, William J. Husa, Florida; J. Leon Lascoff, New York; Heber W. Youngken, Massachusetts. *Second Vice-President*, A. O. Mickelsen, Oregon; E. R. Serles, South Dakota; Edward Spease, Ohio. For *Council*, Walter D. Adams, Texas; F. E. Bibbins, Indiana; W. Mac Childs, Kansas; H. C. Christensen, Illinois; C. J. Clayton, Colorado; C. H. Evans, Georgia; R. P. Fischelis, New Jersey; Ernest Little, New Jersey; A. L. I. Winne, Virginia.

The report was signed by Arthur D. Baker, Frank Nau, H. C. Christensen, Hugo H. Schaefer, W. M. Hankins, John C. Krantz, Jr., R. C. Wilson, *Chairman*.

A. G. DuMez requested that his name be withdrawn as nominee for *President*, and Edward Spease, the withdrawal of his name as nominee for *Second Vice-President*.

Chairman Jones said that there were two ways open for filling the vacancies—to accept nominations from the floor or to refer the report back to the Committee on Nominations. On vote it was decided to refer the report back to the Committee and it was so ordered.

The Committee on Nominations also presented nominations for officers of the House of Delegates: Roy B. Cook, of West Virginia, for *Chairman*, and C. Thurston Gilbert, of Connecticut, for *Vice-Chairman*. There being no further nominations from the floor, the nominees were duly elected.

The Committee on Nominations retired.

Chairman Theodore J. Bradley presented the report of the *Committee on Transportation*, which on motion, duly seconded, was accepted. He then presented the report of the Committee on *Place of Meeting*. The Committee's report recommended that the ASSOCIATION meet in Dallas, Texas, in 1936, the meeting to be held, if possible, during one of the last two weeks in August.

Motion was made by F. H. Freericks, seconded by F. C. A. Schaefer, that the report be accepted; it was so voted.

Walter D. Adams and H. F. Hein expressed appreciation for the vote favoring Dallas, Texas, and assured a welcome to the members and that everything possible would be done to bring about a successful meeting. It was also suggested that a post-convention tour might be arranged to Mexico City.

Chairman Jones called for a supplemental report of the Committee on Nominations. The name of E. Fullerton Cook was presented as the nominee for *President* to fill the vacancy and that of James C. Munch for *Second Vice-President*.

A motion was made by Theodore J. Bradley, seconded by F. C. A. Schaefer, that the report be accepted. On vote the nominees were unanimously accepted.

The report of the Committee on the Study of Pharmacy (Program item No. 6) was called for—Chairman Fischelis stated that he would present the report on Friday.

The Second Session of the House of Delegates was then adjourned.

THIRD SESSION.

The Third Session of the House of Delegates was convened by Chairman Rowland Jones, Jr., Friday, August 9, at 2:15 P.M. Roll Call was omitted, the minutes of the Second Session were

read and approved on motion of Charles J. Clayton, a second, and vote. (The minutes of the Second Session precede.)

The report of the delegate to the National Drug Trade Conference, R. P. Fischelis, was received.

The report of the Committee on the Study of Pharmacy, R. P. Fischelis, *Chairman*, was received.

President R. P. Fischelis called attention to several resolutions introduced at the Conference of Pharmaceutical Law Enforcement Officials.

*Resolution I.* "Restricting the sale of drugs and medicines by stores where there is no registered pharmacist."

*Resolution II.* "Licensing all manufacturers of drugs and medicines, requiring some standard."

*Resolution III.* Relating to Patent Medicines.

*Resolution IV.* "That members of the Conference coöperate with the various branches of the medical profession—physicians, pharmacists and nurses—in matters having to do with economic conditions as they affect these three professions."

*Resolution V.* "Setting forth that the Conference believes that more extensive use should be made of the knowledge possessed by pharmacists." There was no discussion.

Chairman Jones introduced Mrs. Edna Gleason, of California, who made several presentations. Mrs. Gleason brought a message of appreciation from the Chinese Pharmaceutical Association of California. She stated that the ASSOCIATION coöperated with the druggists of California 100 per cent and they had asked her to bring a greeting from them to the AMERICAN PHARMACEUTICAL ASSOCIATION. It was her intention to present one of the gifts (Chinese vases) to President Fischelis and the other to the incoming president, P. H. Costello. President Fischelis expressed his thanks. Mrs. Gleason then presented Mr. Costello with a "Goddess of Good Luck;" she was certain that he would need it; he expressed his thanks.

Chairman Jones said that the House of Delegates appreciates the message from the Chinese Pharmaceutical Association of California.

The report of the Committee on Prerequisite Legislation was presented by Chairman C. B. Jordan; on motion, duly seconded, the report was accepted for publication; it follows:

### REPORT OF THE JOINT COMMITTEE OF THE A. PH. A., N. A. B. P. AND A. A. C. P. ON PREREQUISITE LEGISLATION.

The members of your Committee have endeavored to contact all states in which prerequisite legislation was considered. The members of the Committee were assigned the duty of contact as follows: Dean H. Evert Kendig was assigned a report of the District of Columbia Bill; Carl G. A. Harring a report of the activity in Massachusetts; and Dean William B. Day was assigned the task of securing information from Vermont regarding prerequisite legislation. Your chairman assumed the responsibility for the other states in which there was prerequisite activity. The report is as follows:

*Massachusetts.*—Mr. Harring reports that a prerequisite law was introduced in the Massachusetts Legislature but was killed in Committee by the usual plea that it would "prevent the poor boy from having an opportunity." Mr. Harring, however, indicates that there will be a different attack next year and expresses hope for success.

*Michigan.*—Director E. J. Parr, of Drugs and Drug Stores in Michigan, reports that House Bill 500 was passed and signed by the Governor. This Bill requires that "on and after January 1, 1938, every applicant for such a certificate shall furnish satisfactory evidence that he graduated from an accredited school or college of pharmacy." Heretofore Michigan has had a law requiring only two years of college attendance. It is, of course, anticipated that the Board of Pharmacy will recognize no course in pharmacy of less than four years. So, beginning with January 1, 1938, Michigan will join the states that have full prerequisite laws.

*Iowa.*—Dean W. J. Teeters, of the College of Pharmacy of the University of Iowa, reports that the Iowa law was amended so that on and after July 4, 1936, every applicant must be a graduate of a school or college of pharmacy recognized and approved by the Board of Pharmacy Examiners, and further that no college of pharmacy shall be approved by the Board of Pharmacy Examiners as a college of recognized standing unless the entrance and graduation requirements are

equivalent to those prescribed by the American Association of Colleges of Pharmacy. So, Iowa has joined the group of states of full four-year college prerequisite requirement.

*Vermont.*—Secretary W. B. Eastman of the Vermont State Pharmaceutical Association writes Dean Day as follows:

"I am sorry to have to inform you that we have no prerequisite law. A bill was introduced two years ago, but was killed. In a state like ours where the Legislature is made up very largely of farmers it is very hard to get any legislation passed that is of benefit to the druggists."

*Tennessee.*—Secretary J. B. Sand, of the Tennessee Board of Pharmacy, reports to me as follows:

"A prerequisite bill was introduced by the Tennessee Pharmaceutical Association in the recent session of the Tennessee Legislature, but never got past the steering committee."

*Arizona, New Hampshire and New Mexico.*—Secretary Christensen of the N. A. B. P. reports that these states have recently enacted legislation requiring graduation from a recognized college of pharmacy as a prerequisite to taking the examination for registration as a pharmacist. He also reports that the District of Columbia and Porto Rico have prerequisite laws. Missouri is requiring, by board ruling, some college training of applicants for pharmacy license.

Your Committee is delighted to report the progress of prerequisite legislation in Arizona, District of Columbia, Iowa, Michigan, New Hampshire, New Mexico and Porto Rico. This leaves the states of Massachusetts, Vermont, Tennessee and Nevada, and the territory of Alaska as the only commonwealths without prerequisite legislation.

C. B. JORDAN, *Chairman.*

The report of the Committee on Pharmacy Corps in U. S. Army was read by Chairman E. H. Kendig. The report was on motion, duly seconded, accepted for publication; it follows:

REPORT OF THE COMMITTEE ON THE ESTABLISHMENT OF A PHARMACEUTICAL CORPS IN THE UNITED STATES ARMY, 1935.

Your committee was instructed by Resolution No. 17, adopted by the ASSOCIATION in Washington last year, to secure the establishment of pharmacy properly in the United States Army, and our efforts have been directed to the objective. While we cannot report consummation of your desires, we believe the year's efforts have brought us much closer to achievement than heretofore. In fact, if the ASSOCIATION is willing to accept for the present, in lieu of the separate pharmacy corps, the proposal of the Surgeon General, to commission a fair number of pharmacists in the proposed Medical Auxiliary Corps, it is highly probable that during the coming year pharmacy will receive the recognition for which it has so long and earnestly striven.

Your Committee has worked in coöperation with the committees of the American Association of Colleges of Pharmacy and National Association of Boards of Pharmacy and has had the very valuable assistance of President Fischelis and Secretary Kelly.

In behalf of the committee, whose members are widely separated geographically, President Fischelis and Secretary Kelly had a conference in Washington on February 18th with Surgeon General Patterson and we quote from a letter of President Fischelis reporting the result of the conference to your chairman.

"He (Surgeon General Patterson) told us that whereas the plans of the War Department contemplate an increase in the standing army, no corresponding increase in medical personnel has been provided for in any proposed legislation. The Surgeon General stated that he considered it important to obtain additional personnel to carry on the work of the Medical Department in view of the increased number of enlisted men. He hoped to secure the coöperation of all professional societies represented by commissioned personnel in the medical and allied departments of the army when the time comes to press for an increase in the personnel coming under his direction. He stated that he recognized fully the importance of proper supervision of the pharmaceutical work in the army, but impressed upon us that ordinary dispensing, such as is carried on in the army, need not be done by commissioned pharmacists. He was, of course, in favor of having a certain number of commissioned pharmacists attached to the Medical Corps to supervise dispensing and other pharmaceutical activities. However, he laid stress on the fact that in order to justify the expense of commissioned pharmacists in the higher ranks, they would have to assume executive duties which go far beyond ordinary pharmaceutical work in civil life."

"He is not an opponent of commissions for well-trained pharmacists who are graduates of four-year college courses, but he pointed out that the needs of the service would be met by assigning approximately one-third of the commissions in the Medical Administration Corps to properly qualified pharmacists. He is absolutely opposed to a separate corps as he considers it inadvisable to detach the various auxiliary services of the Medical Department of the army from the Medical Corps itself."

Supplementing his statements of February 18th, under date of March 11th the Surgeon General wrote as follows:

"I heartily favor and will support legislation liberalizing the eligibility requirements of this Corps or, as we would prefer to call it, a Medical Auxiliary Corps. There are now two bills before Congress relative to the Medical Auxiliary Corps which, like all such piece-meal legislation, are unsatisfactory and which I must oppose. However, I believe that at the next session of Congress a new Medical Department bill will be introduced containing desired changes for all branches of the Medical Department and which will include provision for an adequate number of qualified pharmacists in the commissioned grades of that Corps."

That you may be informed even more fully of the attitude of the high command of the Army toward pharmacy and have a better understanding of some of the problems which must be considered by the Army administration, we quote from a letter written by Surgeon General Patterson, April 15th, in reply to a communication from Representative Jed Johnson of Oklahoma, asking what the attitude of the department would be to legislation proposing to increase the Medical Administrative Corps to include forty commissioned officers as pharmacists.

"I have your letter of the 8th instant and am very glad to give my opinion concerning the need for pharmacists in the Medical Department of the Army.

"For some years it has been recognized that it would be desirable and save much of the valuable time of medical officers to have a sufficient number of registered pharmacists in the Army responsible to the Surgeon General for the general dispensing of medicines in our larger hospitals and for the instruction of enlisted men who necessarily have to do the dispensing in the smaller hospitals. However, the plan that the Army has followed ever since the earliest days of its existence, and which is still in force, is that in *every hospital* an officer of the Medical Corps, in addition to his other duties, is directly in charge of the pharmacy and instructs the enlisted men who do this work in the pharmacy or dispensary. However, you may not know that in the Army the actual compounding of medicines is reduced to the minimum. We buy the larger proportion of all of our drugs in such form as to be ready for immediate use; for example, pills, capsules, tablets certain tinctures, etc. At all of our larger hospitals, and to a lesser extent in the smaller ones, we naturally are obliged to compound some medicines and to make up stock mixtures, but there is little actual compounding of medicines in the Army compared to that carried on in drug stores in civil life. Another reason why there is less actual compounding of medicines in the Army is that we have a restricted Supply Table which does not include hundreds of drugs used in civil life. For reasons of economy and to lessen bulk and expense of transportation, our list is confined to essential drugs in commercial use of approved value, specifics, and the newer remedies evolved from time to time believed to be of therapeutic value. In the Army the first assistant of the officer in charge of a pharmacy is usually a non-commissioned officer of some years of experience who has been well taught.

"At the present time there are forty registered pharmacists among the enlisted force of the Medical Department, approximately two-thirds of whom are engaged in the dispensing of medicines. These men were trained in pharmacy in civil life prior to their enlistment in the Army. In the Navy pharmacists are enlisted men, though the higher ones holding the grade of Chief Pharmacist are given warrants corresponding to the grade of Warrant Officer in the Army. They are not commissioned officers.

"A careful canvas of our hospital situation in the Army indicates clearly that we would not be justified in having high-grade pharmacists, college graduates, on duty at every small hospital. The amount of dispensing of medicines would not require their full time and the services of such specially educated men would be largely wasted if restricted entirely to the field of pharmacy. The only places where highly qualified pharmacists would fit into the present organization of the Medical Department of the Army would be at general hospitals and a few large station hospitals, but only in a definitely limited number."

"The present Medical Administrative Corps in many respects has not proven satisfactory to the Army in peace time. We could use the services of specially educated officers other than those who only have administrative qualifications, to assist the officers of the Medical Corps in their many and varied duties. I proposed to the War Department shortly after I became Surgeon General that a bill to reorganize and increase the strength of the Medical Department of the Army be introduced into Congress. At that time (October 1931) this was disapproved by the War Department on the ground that it was not a favorable time, owing to the economic situation. However, it will not be economy to postpone such action indefinitely. We feel that a certain number of pharmacists should be commissioned in the Medical Department of the Army, to assist in and be largely held responsible for the pharmaceutical service, just as medical officers are now and have been in the past, and that they should be incorporated into a corps of officers which will include other men who possess special knowledge and qualifications of a character which will be of assistance to the Medical Department as a whole in carrying out its mission: *i. e.*, the exclusion of the unfit, the prevention of disease, the maintenance of the health of the Army, and the care and treatment of military personnel whenever sick or injured in garrison or field.

"The Medical Administrative Corps as now constituted is therefore not satisfactory, because it is limited strictly to men who are supposed to have administrative qualifications. As a matter of fact, the title of this group should be changed to the Medical Auxiliary Corps in which could be placed men who have knowledge of many of the 'adjunct' sciences or those which may be of distinct assistance to the medical service. For example, it would be an advantage to have several sanitary engineers in the new Medical Auxiliary Corps (when authorized by Congress), one or two botanists, one or two good hospital architects, one or two professional chemists, one or two entomologists, a group who are graduates of colleges of pharmacy, as well as former enlisted men who have had training in Army administration. All candidates for this Corps, however, should only be commissioned after a strict examination along general lines and in their specialties, with the requirement that no one should be eligible to take the examination unless of proper age, physically qualified, and a graduate of a four-year course in a college or university. In the case of candidates from the enlisted ranks, the examination would be of such a nature as to reveal evidence of knowledge equivalent to a college degree.

"You will see from what I have said that we are in favor of having certain changes made in the organization of the Medical Department of the Army, which will include the creation within it of a Medical Auxiliary Corps, and provide, among other specially trained men, such number of pharmacists as the actual needs of the Army justify. The Medical Auxiliary Corps in time of peace need never be a large one, but effort should be made to build up a Reserve of such officers for use in time of war.

"I believe that next year will be a favorable time for the Surgeon General to propose again to the War Department the introduction of a bill in Congress which, if enacted, will increase the strength of the Medical Department and authorize some of the organizational changes I have mentioned.

"My suggestion is that nothing be attempted at the present time, but that whenever a bill for the Medical Department is forwarded to Congress by the War Department all those interested, including the pharmacists' organization, should support the bill to insure its passage."

A conference with the Surgeon General was arranged for April 6th, and he also acceded to our request for an opportunity to visit one or more hospitals and arranged for those interested to observe the pharmaceutical requirements under the present form of organization.

To this meeting were invited representatives of the American Association of Colleges of Pharmacy and the National Association of Boards of Pharmacy. The result of this meeting was given publicity by a bulletin which, coincident with its release to the pharmaceutical press was mailed to the deans of the schools of pharmacy and the secretaries of all state associations. The bulletin read as follows:

PHARMACEUTICAL SERVICE IN THE ARMY.

"Representatives of the AMERICAN PHARMACEUTICAL ASSOCIATION, the American Association of Colleges of Pharmacy and the National Association Boards of Pharmacy, met in Washington on April 5th and 6th, at the invitation of Dr. H. Evert Kendig of Philadelphia, who is Chairman of the A. PH. A. Committee on Pharmacy Corps, to continue the joint efforts to improve the

pharmaceutical service for the Army and to secure better recognition for pharmacists by improving their status.

"Those present were R. P. Fischelis, E. F. Kelly for the A. PH. A., Ernest Little, Townes R. Leigh and A. G. DuMez for the A. A. C. P., and R. L. Swain for the N. A. B. P. Unfortunately, Chairman Kendig was unable to attend on account of illness.

"The first joint session was held on the evening of April 5th, when plans to broaden the work of army pharmacists were considered. Saturday forenoon was occupied by visits at the invitation of the Surgeon General to the hospitals at the Army Medical Center and at Fort Myer. The pharmacies at those hospitals and the work carried on in them were carefully inspected. A conference with Surgeon General Patterson and Colonel McDonald followed, during which proposed legislation looking to a commissioned rank for Army pharmacists was discussed.

"It is expected that a similar joint committee meeting will be held in Washington during June or July and that an encouraging report of progress can be made at the Portland, Oregon, meeting, August 5th–10th.

"The efforts to secure a satisfactory status for pharmacy in the Army and the Navy have been interrupted by the reductions affecting these services during the depression. This work is being taken up aggressively again and when a satisfactory program is worked out the national state and local associations will be informed and their coöperation requested."

The continuity of the committee's effort was somewhat interrupted by the expiration of General Patterson's term as Surgeon General. He was succeeded June first by Colonel Charles Ransom Reynolds with the Rank of Major General.

Secretary Kelly endeavored to arrange a meeting between our group and the new Surgeon General and in this connection was invited by General Reynolds to call June 17th to discuss plans for the meeting with the Committee. As the appointment tentatively set for some day in July had to be canceled owing to General Reynolds suddenly leaving for Denver and San Francisco on official business, we insert a courteous and friendly letter which Surgeon General Reynolds wrote to Secretary Kelly July 18th. It is informative and indicates the attitude of the new Surgeon General toward Pharmacy in the Army.

"Official duties necessitate my leaving the office to-day for a tour of inspection of Army General Hospitals within the continental United States, extending over a period of approximately three weeks. I regret that this tour will delay the date of a conference to be held upon your request between myself and representatives of the AMERICAN PHARMACEUTICAL ASSOCIATION regarding proposed legislation authorizing the admission of registered pharmacists into the military service as commissioned officers.

"My predecessors have favored legislation authorizing the reorganization of the Medical Administrative Corps into a Medical Auxiliary Corps wherein may be commissioned registered pharmacists, sanitary engineers, and other professional specialists not now provided for in the Medical Administrative Corps, as well as administrative specialists. Unfortunately, economic conditions have prevented any increase in commissioned personnel of the Medical Department since 1920. Although I have not yet had the time to analyze thoroughly the needs of the Medical Department for additional commissioned personnel since my appointment recently, I may state that, in general, I agree with my predecessors on this subject. I would like to make it clear that I do not favor the establishment of a separate Pharmacy Corps in the Medical Department.

"I expect conditions in the near future to be more favorable for securing legislation providing for an increase in the Medical Department. Upon my return to the office next month I shall give careful thought and consideration to proposed legislation for increasing the Medical Department.

"I appreciate the interest of the members of the AMERICAN PHARMACEUTICAL ASSOCIATION in the Medical Department of the Army and shall be pleased to confer with their representatives sometime after September first, regarding the pharmaceutical service in the Army and its improvement.

"Please extend my greetings and best wishes to the members of the AMERICAN PHARMACEUTICAL ASSOCIATION assembled in annual convention in Portland."

Bills to improve the pharmaceutical service in the army were introduced in the House of Representatives during the present session by Representatives McSwain of South Carolina, Evans

of New York, and Johnson of Oklahoma. They were all referred to the Committee on Military Affairs where they stayed.

From conversations held with congressmen, the general impression of your committee is that the members approached are friendly to a proposal to improve the pharmaceutical service in all branches of the Military Service and will support legislation having the approval of the ASSOCIATION and the Surgeon General. As the Surgeon General is on record as favorable to the granting of commissions to properly qualified pharmacists in the proposed Medical Auxiliary Corps, and as he is very definitely opposed to the establishment of a Separate Pharmacy Corps, your committee recommends:

*First.*—That the committee be continued and that it be instructed to continue its efforts to effect improvement in the pharmaceutical service in the Army, and to obtain therein for pharmacy the recognition and status to which it is entitled by virtue of its traditions and the useful service which it is prepared by education and training to render.

*Second.*—That the committee be instructed to coöperate with the Surgeon General in obtaining the passage of legislation which will bring about the substance of recommendation number 1. If the objective as stated in the recommendation number 1 cannot be attained by this procedure, we recommend:

*Third.*—That the committee be instructed to obtain the desired improvement in the pharmaceutical service and its concomitant recognition in the Army by direct appeal to Congress.

Respectfully submitted,

ROBERT L. SWAIN B. TAPPEN FAIRCHILD
FRANK L. MCCARTNEY A. L. I. WINNE
H. EVERT KENDIG, *Chairman.*

The report of the Committee on Prescription Tolerances was presented by Chairman Hugo H. Schaefer; it will be published with the proceedings of the Section on Practical Pharmacy and Dispensing.

Robert P. Fischelis stated that the report of the Committee on Legislation, Ambrose Hunsberger, *Chairman*, would be mailed.

The report of the Committee on Endowment Fund, James H. Beal, *Chairman*, was read by Secretary E. F. Kelly. It was received and the Committee continued; it follows:

COMMITTEE ON ENDOWMENT FUND.

It was agreed at the Washington meeting last year that the Committee on Endowment Fund would refrain from special activity until the planned campaign of the Committee on Maintenance Fund had been consummated.

Nevertheless the Endowment Fund has continued to grow slowly. A donation of Federal Farm Mortgage Bonds amounting to $1000.00 was received during the year, and on June 30, 1935, the Endowment Fund amounted to $17,020.73.

The Chairman has also received the promise from a member of the ASSOCIATION who has been more than usually successful in the practice of his profession, that a provision will be inserted in his Will making a substantial addition to the permanent funds of the ASSOCIATION.

J. H. BEAL, *Chairman.*

The report of the Committee to Draft a Model Restricting Distribution of Drugs and Medicines to Pharmacists, W. Bruce Philip, *Chairman*, was presented by R. L. Swain, who proposed that the report be referred for publication; it was so ordered.

REPORT OF THE COMMITTEE TO DRAFT MODEL ACT RESTRICTING DISTRIBUTION OF DRUGS AND MEDICINES TO PHARMACISTS.

It must be quite evident to all of you that those believing in and appreciating the profession of pharmacy should desire that drugs and medicines be sold to those qualified by law as pharmacists. The states through their public and private school system have spent a considerable portion of the people's money to educate pharmacists to the point where they are privileged as graduates of schools of pharmacy to take state board examinations and become qualified pharmacists. There is no reason why the states should permit others not so qualified to deal in the selling of articles that are so essential to public health. It must be self evident that the public is

interested and should be protected, even if necessary by an extreme law, where the life and the health of the citizens of the states are involved by the handling of a commodity. With this in mind I review the principal status of state laws as now existing in the United States.

Most states restrict the filling of physicians' prescriptions to registered pharmacists. Even these laws have exceptions, the principal exception being that physicians, dentists and veterinarians may fill prescriptions for their own patients. State laws have frowned upon the allowing of qualified physicians, qualified dentists and qualified veterinarians to fill prescriptions for other qualified practitioners. These exceptions are based mostly upon the need for political compromise when the laws were just made rather than upon any general common sense principle. It is reasonable to presume that any practitioner who has to pay for medicine dispensed is apt to consider the cost of the medicine rather than the best interests and need of the patient. This exception is not in the public interest. While from a point of theory I feel sure the committee thinks that any law finally decided upon should restrict the filling of all prescriptions to the registered pharmacist, I do not believe it is politically practical to exclude other professional people in the medical group from filling their own prescriptions.

Next on the list of medicines largely restricted to registered pharmacists is the sale of poisons. Most states at the present time have laws restricting the sales of poisons to registered pharmacists. This is distinctly an admittance that the registered pharmacist is the best qualified person to handle strong and powerful drugs and chemicals in the interests of the public. Here also we have exceptions that are to be found in these laws. These exceptions are also largely politically and economically needed to have a poison law passed by the average state legislature. Horticulturists and agriculturists use insecticide in large quantities. It is not exceptional for a ton of a poison to be sold to a member of this group. This means that the shipment from the manufacturer is usually direct by rail to the horticulturist or agriculturist. It is also common for the state to supply or supervise the sale of insecticide. This means distribution of these poisons through other than drug stores. Here I feel the pharmacist was not alert to follow his advantage of education and service in the earlier days and demand and receive the distribution of poisons needed for the spraying of vegetables and fruits. We find our state poison laws, therefore, in many states limiting the sale of insecticides and poisons to the registered pharmacist when they are sold in original packages such as are used by the average householder—roughly speaking in pound lots and less.

Next we may consider the sale of narcotics. With the exception of exempt narcotics these are sold through hospitals and state institutions and through the channels of the retail drug stores. I feel that the pharmaceutical associations will receive both state and federal support in enacting state laws restricting the sale of all narcotics, that is, including the exempt narcotic preparations by registered pharmacists. Probably hospitals and penal institutions will have to be excepted in handling narcotic drugs. Even here registered pharmacists should be employed.

New York has led the way in restricting that vast field of medicine known as proprietary medicine through the channels of the drug store. New York has enacted a law requiring supervision of sales by registered pharmacists where poisons and powerful medicines are ingredients in proprietary medicines. Pages after pages could be written why registered pharmacists should sell all medicines of interest to public health. Our opponents' strongest argument seems to be that in the past grocery and general dealers have sold proprietary and household medicines without detriment to the public health. This statement, though, is general and cannot be supported by facts and figures. The damage to public health by the general sale of medicines can never be proved in my opinion or accurately estimated. I understand Pennsylvania also has a restricting law as to some proprietary medicines.

This briefly covers the résumé of the present legal supervision of the sale of drugs and medicines. There are, it must be remembered, two important factors to any restrictive law. One is the need for a rigid enforcement of the law and the other is the legality of any law passed. It is common knowledge that many laws restricting the sale of drugs in some states are not enforced. This can be corrected usually by an adequate sum of money being granted to the state enforcement authorities, a sum sufficient for inspection and prosecution. The legality of a restricting law can often only be determined by a test in Court. It must be admitted that the police power of the states is far in excess of the so-called police power of our Federal Government. The recent United States Supreme Court decisions are, therefore, not in point when considering the possible unconsti-

tutionality of a state law regulating the sales of medicines and drugs, permitting them only to be sold by registered pharmacists.

This committee was appointed at a time when a large majority of the state legislatures were in session. It was not at that time advisable in my opinion to endeavor to collect material for such a state law as is desired. This law is too important for snap judgment to be taken and a poorly prepared law presented to the states for introduction into the then convening state legislatures. Now that the stage legislatures have adjourned and state pharmaceutical associations have met and their deliberations are a matter of record, a restrictive law can now be considered. The fall of the year is the best time to start collecting the necessary data for the formulating of the desired law. At least six months should pass in collecting this material. Then the committee should endeavor to frame such desired legislation as may help toward this much talked of ideal. After this a suggested law should be drafted and published, constructive criticism asked for and then a year and a half or two years hence a bill be finally discussed for the state associations to consider getting behind and introducing in their respective legislatures.

Therefore, in conclusion I ask that this committee be continued, although I also suggest that the new president of the AMERICAN PHARMACEUTICAL ASSOCIATION be free, if he desires, to appoint a new chairman and a new committee. I also offer the suggestion that it may be better in the opinion of the president or the ASSOCIATION that this committee function as a sub-committee of the legislative committee or some other committee that has already been appointed having a similar obligation and one that is collecting similar, if not the exact data from the various states.

On behalf of the committee I wish to state that the other members of the committee are experienced, seasoned legislators. Their words and opinion are to be carefully considered at all times. They are competent to help form any model law that pharmacy needs. Personally, I would suggest their retention on a new committee when appointed. The fact that this committee has not reported a law at this time is in no way due to their neglect or their unwillingness to do their part.

W. BRUCE PHILIP, *Chairman.*

The report of the Committee on Development of Pharmacy Laws was called for; Chairman R. L. Swain made a verbal report and will be followed by a written report to be published.

Secretary E. F. Kelly presented a verbal report for the Committee on Press Relations. In concluding he thanked the members of the Local Committee, through whom the fullest press report of the meeting had been made possible.

Secretary E. F. Kelly reported verbally for the Committee on Professional Relations, L. A. Seltzer, *Chairman*. Report is to be mailed. On motion by C. T. Gilbert and a second, the report was referred to Council.

The delegate of the Scientific Section, F. E. Bibbins, presented the report for the Section; it follows:

To the House of Delegates, AMERICAN PHARMACEUTICAL ASSOCIATION.

The Scientific Section held three regular sessions and one joint session with the Section on Practical Pharmacy and Dispensing.

Fifty-one papers were presented and discussed. Thirty-nine papers were presented by title.

The following recommendations from the Committee on Chairman's address were approved. The report follows:

Your Committee commends the Chairman for his thoughtful address.

We approve Recommendation 1. "The Board of Review on Papers shall be given power to reject or accept papers, or parts of papers, for publication and to require revision by the authors when necessary."

I move that the Scientific Section instruct the secretary of the Section to request that the Council of the AMERICAN PHARMACEUTICAL ASSOCIATION grant the authority to the Board of Review on Papers necessary to carry out the objective of this recommendation.

We approve Recommendation 2. The Board of Review on Papers shall be increased to ten members, each serving for five years. They shall be appointed by the Chairman. Any vacancies shall be filled by the contemporary Chairman.

"I move that the Board of Review on Papers be increased to ten members, that the Chair-

man appoint two members to serve for a term of five years, two members to serve for a term of four years, two members to serve for a term of three years, two members to serve for a term of two years, two members to serve for a term of one year; that in 1936 and in each year thereafter two members be appointed by the Chairman to serve for a term of five years."

Your Committee approves the intent of Recommendation 3. "The Board shall draw up a list of rules and regulations for the guidance of its members and of authors. This list shall be presented for approval by this Section at the next annual convention." Since instructions to authors are now carried in the JOURNAL and are subject to continuous revision at the request of members and with the consent of the Editor, your Committee believes that no action on this recommendation is necessary at this time.

Recommendation 4. "That a regulation be adopted requiring each paper to be presented as given on the program, either in total or in abstract, and original copies of the paper to be turned over to the secretary at that time. In each case of inability to appear in person, the author should delegate some one else to present the paper." Your Committee does not approve this recommendation. We feel, however, that the intent of the recommendation should be carried out as effectively as possible by the officers of the Section. We do not feel that the acceptance of papers by title should be prohibited. Signed by the Committee: LOYD E. HARRIS, C. O. LEE, FRANCIS E. BIBBINS, F. O. TAYLOR, GLENN L. JENKINS, *Chairman*.

The report of the Committee on Ebert Prize awarding the prize this year to Marvin J. Andrews for his paper presented at the Washington meeting on "Determination of a Reasonable or Permissible Error in Dispensing" was approved.

The following officers were elected and installed:

*Chairman*, H. M. Burlage; *First Vice-Chairman*, Glenn L. Jenkins; *Second Vice-Chairman*, J. C. Ward; *Delegate to the House of Delegates*, E. V. Lynn.

(Signed) F. E. BIBBINS, *Secretary*.

The report of the Section on Historical Pharmacy was presented by Heber W. Youngken, *Secretary;* it follows:

The Section on Historical Pharmacy held two sessions on August 7th and August 8th, during which twenty-six papers covering a great variety of historical subjects were presented, fourteen of which were read by title.

The following officers were elected for the ensuing year:

*Chairman*, Heber W. Youngken; *Secretary*, Loyd E. Harris; *Historian*, Eugene G. Eberle; *Delegate to the House of Delegates*, C. O. Lee.

(Signed) H. W. YOUNGKEN, *Secretary*.

(See also report of Committee on Resolutions, page 712.)

The report of the Section on Education was presented by George C. Schicks, as follows:

Twenty-one papers were presented before the Section on Education and Legislation on a wide variety of subjects of educational interest.

There were two meetings of the Section and one joint meeting with the Conference of Pharmaceutical Law Enforcement Officials. All of these meetings were well attended.

The following resolutions were presented and adopted:

"To the end that helpful information regarding ways and means of encouraging the prescribing of U. S. P. and N. F. drugs and preparations by dentists be disseminated and made available to the pharmacists of this country; and to the end that the good work of one community or state may not be lost to other communities or states, therefore, *be it resolved:*

"That a Committee be appointed—to be known as the National Committee on Professional Information Pertaining to Dental Pharmacy. Its specific function shall be:

"*First*—To study the methods used by the various local, county and state organizations in their efforts to bring before dental men usable information on U. S. P. and N. F. drugs and preparations.

"*Second*—To present to the pharmacists of the nation at our next annual convention a digest of constructive ideas gathered from such a survey and other sources.

"*Third*—The Committee is to act as a center for receiving and disseminating information which will increase the pharmacist's opportunities for professional scientific service to the dentist."

*Be it further resolved*, that the Chairman of the Section on Education and Legislation appoint a Committee to study the problem of coöperation with hospital pharmacists and their service to the allied medical professions.

*Resolved*, that the Section on Education and Legislation go on record as requesting the AMERICAN PHARMACEUTICAL ASSOCIATION to create a body or bodies with the necessary working facilities to give the pharmacists in this country up-to-date information on such pharmaceutical and medical material as new drugs, preparations, formulas, standards, plans for detailing doctors and dentists, as well as other medical groups, and other information which will prove helpful and be instrumental in increasing the coöperation and service of the pharmacist to the allied medical professions. This information is to appear periodically throughout each year and some method be devised so that all pharmacists may be privileged to take advantage of such a pharmaceutical service.

The following officers were elected for the 1936 Section on Education and Legislation: *Chairman*, C. Leonard O'Connell; *Vice-Chairman*, George C. Schicks; *Secretary*, George A. Moulton; *Delegate to the House of Delegates*, L. W. Rising.

(Signed) GEORGE C. SCHICKS, *Delegate*.

(See report of the Committee on Resolutions, page 711.)

The report of the Section on Practical Pharmacy and Dispensing was presented by Ralph W. Clark.

The Chairman's address was given, the Secretary's report read and the papers presented. The following recommendations were approved:

*Recommendations from Chairman's Address:*

"1. The Chairman of the Committee on Glass Standardization previously requested that this Committee be discontinued, but the Section overruled the recommendation. Since he repeats this request I recommend that the Committee be discontinued unless recent developments have arisen which warrant its continuation.

"2. I recommend the continuation of the Committee for the collection of information pertaining to professional pharmacy and that the Council be requested to appropriate $75.00 to carry on this work."

Recommendations made by the Committee for the collection of information pertaining to Professional Pharmacy.

1. This Section, in coöperation with the Section on Education and Legislation, or the ASSOCIATION, should foster a vigorous program to find out wherein the education of pharmacists is lax in respect to the attainment of professional ideals, thereby endeavoring to uplift the dignity of pharmacy as a profession.

2. The Section or the ASSOCIATION should make a survey as to the number of hospitals employing registered pharmacists as compared with those that employ more.

3. The ASSOCIATION should endeavor to enlist the many hospital pharmacists in this country to join the A. PH. A. as these men are the first to actually contact the young physician after they graduate.

4. The Section or the ASSOCIATION should encourage hospital pharmacists to conduct dignified, scientific laboratories offering every assistance in the way of consultation, research, etc., instead of conducting just a "Pill Dispensing" storeroom.

5. The ASSOCIATION should endeavor to correlate and supply authoritative information that will be of aid to local and state associations in promoting the use of official products.

(Signed) RALPH W. CLARK, *Delegate*.

The report of the Conference of Pharmaceutical Association Secretaries was presented by Charles J. Clayton.

The Conference of Pharmaceutical Association Secretaries held two sessions (Wednesday afternoon and Friday morning) both presided over by President F. V. McCullough of Indiana.

In the absence of Secretary Carl G. A. Harring, of Massachusetts, J. Lester Hayman, of West Virginia, acted in that capacity.

Sixteen states were represented by the Secretaries of their respective associations.

In addition to the two sessions previously mentioned, there was also held on Thursday

evening, a joint session of the Section on Education and Legislation; the Conference of Law Enforcement Officials and the Conference of Secretaries.

At the Final Session, the following officers were elected:

*President*, John Slocum, Iowa; *First Vice-President*, Roy S. Warnack, California; *Second Vice-President*, Wm. B. Day, Illinois; *Secretary-Treasurer*, Carl G. A. Harring, Massachusetts.

*Executive Committee:* The four elected officers and F. V. McCullough, Indiana; R. C. Wilson, Georgia; J. Lester Hayman, West Virginia; Jennings Murphy, Wisconsin; A. L. I. Winne, Virginia. *Delegate to the House of Delegates*, Charles J. Clayton, Colorado.

(Signed) CHARLES J. CLAYTON.

The reports of the Committee on State Codes and of the Committee on Code Matters were called for.

Secretary E. F. Kelly stated that because of the decision of the Supreme Court having discontinued the Drug Code, no report would be made. He recommended that and asked that the report be considered as received and the committee be discontinued.

No report was received from the Committee on Professional Relations.

The report of the Committee on Resolutions was called for. Chairman R. L. Swain thanked the members of the Committee.

*The report of the Committee on Resolutions is printed on pages 708 to 715 of the August* JOURNAL A. PH. A.

In order to avoid duplication in printing only Recommendation No. 1 is reprinted. An addition was made to the Committee report on Recommendation No. 9—matter in brackets at end.—EDITOR.

*Recommendation No. 1.*

It is recommended that it shall be the policy of the AMERICAN PHARMACEUTICAL ASSOCIATION to require its full-time officers to confine their pharmaceutical activities to the affairs of the ASSOCIATION. This is not to be interpreted as an abridgment of the privilege to take part in related affairs in the capacity of advisor, committeeman or delegate. It is, however, to be interpreted as abridging the privilege of serving in a secretarial or managerial capacity to any other organization or group or to act as the spokesman or representative of any other organization or group within the sphere of pharmaceutical activity unless permission to do so is specifically granted by the Council.

The Committee is sympathetic with the principle of this recommendation in the President's Address but feels that the purpose can be fully effectuated by referring it to the Council for further study and for whatever action it deems to be in the best interest of the ASSOCIATION.

After the reading of Recommendation No. 1 and of the Committee's report, President Fischelis moved that the President's recommendation be substituted for that of the Committee; this motion was seconded by W. J. Husa. It was discussed by Robert P. Fischelis, W. J. Husa and others. A *viva voce* vote was taken. A roll call was requested and W. J. Husa was asked to check the delegates with the secretary; the vote was tabulated by Chairman Rowland Jones and Chairman R. L. Swain of the Committee. Roll Call showed 25 in favor of the substitute motion and 18 against, the secretary not voting. Recommendations of the president up to No. 8, inclusive, as submitted by the Committee were adopted.

No. 9 was referred to the Council, the secretary of the National Association of the Boards of Pharmacy and the secretary of the American Association of Colleges of Pharmacy. President Fischelis moved an amendment, that the Council on Pharmaceutical Practice of the ASSOCIATION be included. The amendment was carried.

The Recommendations 10 to 17, inclusive, were adopted.

Recommendation on Resolutions of the New York Branch was approved and referred to Council; Recommendation on Local Branches was referred to Council. Recommendations on Weights and Measures, Section on Education and Legislation, Section on Historical Pharmacy were adopted, the one on publications of the latter was disapproved. The resolution of R. L. Irazary and the one relating to the American Association for the Advancement of Science were adopted. The resolution from Indiana Pharmaceutical Association and the one submitted by the Section on Education and Legislation were approved and referred to Council. All other recommendations of the Committee on Resolutions were adopted as presented.

The report of the Committee as a whole was then approved.

There being no Unfinished Business, Chairman Rowland Jones installed Roy Bird Cook as *Chairman* of the House of Delegates, and C. Thurston Gilbert as *Vice-Chairman*, who responded with thanks for the honor conferred.

The session of the House of Delegates was then adjourned.

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# PROCEEDINGS OF THE LOCAL BRANCHES

"All papers presented to the Association and Branches shall become the property of the Association with the understanding that they are not to be published in any other publication prior to their publication in those of the Association, except with the consent of the Council." —Part of Chapter VI, Article VI of the By-Laws.

ARTICLE III of Chapter VII reads: "The objects and aims of local branches of this Association shall be the same as set forth in ARTICLE I of the Constitution of this body, *and the acts of local branches shall in no way commit or bind this Association, and can only serve as recommendations to it.* And no local branch shall enact any article of Constitution or By-Law to conflict with the Constitution or By-Laws of this Association."

ARTICLE IV of Chapter VII reads: "Each local branch having not less than 50 dues-paid members of the Association, holding not less than six meetings annually with an attendance of not less than 9 members at each meeting, and the proceedings of which shall have been submitted to the JOURNAL for publication, may elect one representative to the House of Delegates."

Reports of the meeting of the Local Branches shall be mailed to the Editor on the day following the meeting, if possible. Minutes should be typewritten with wide spaces between the lines. Care should be taken to give proper names correctly and manuscript should be signed by the reporter. *Please advise us of changes in Roster and mail reports promptly.*

## PHILADELPHIA.

The regular monthly meeting of the Philadelphia Branch, AMERICAN PHARMACEUTICAL ASSOCIATION, was held, Tuesday night, October 8, 1935, at 8:15 P.M., at the Philadelphia College of Pharmacy and Science, E. H. MacLaughlin, presiding.

The minutes of the last meeting were read and approved.

Dr. James C. Munch, chairman of the membership committee, presented the name of John Zinsser, recently elected president of Sharp & Dohme, for membership. Mr. Zinsser was unanimously elected to membership in the Local Branch.

The speaker of the evening, Prof. E. Fullerton Cook, chairman of the Revision Committee, U. S. P. XI, was then introduced. His topic was "The New Features of the Revised Pharmacopœia." The speaker began his most interesting dissertation with a review of the history of the U. S. P. and then proceeded in a masterful fashion to explain the organization, set-up, and functions of the Revision Committee and the way it carried on business. He discussed certain pertinent changes in titles in the U. S. P. XI, as well as certain additions and deletions. Changes in requirements for storage and preservation were delineated—this brought forth discussions from the floor.

The Local Branch was indeed fortunate in having the chairman of the Revision Committee discuss the U. S. P. XI, for no one is more able to do this than Professor Cook. We can now more fully appreciate the tremendous amount of research and revision work necessary, and certainly each and every pharmacist in the United States should feel proud that the Revision Committee is in such capable hands.

A rising vote of thanks was given the speaker for the information presented.

GEORGE E. BYERS, *Secretary.*

## CHICAGO.

The first fall meeting of the Chicago Branch of the AMERICAN PHARMACEUTICAL ASSOCIATION was held Tuesday evening, October 22nd, at the University of Illinois College of Pharmacy.

The speakers of the evening were Samuel Shkolni, who discussed "Current Topics at the Recent N. A. R. D. Convention in Cincinnati" and Lawrence Templeton, told of "The A. PH. A. Convention in Portland" and "Pharmacy, Salmon and Cascara in Oregon."

A diversified and interesting discussion followed.

## THE REMINGTON MEDAL AWARD.

At the April 8, 1918, meeting of the New York Branch of the AMERICAN PHARMACEUTICAL ASSOCIATION, a special committee made a report, adopted by the Branch and later by the Council of the A. PH. A., which resulted in the establishment of the Remington Honor Medal. The suggestion leading to the provision was made by Hugo H. Schaefer and he has ever since directed the activities of the committee in charge of the annual award. The recommendations for the award are worded as follows:

"That a gold medal to be known as the Joseph P. Remington medal and suitably engraved to be awarded to the man or woman who has done most for American Pharmacy during the preceding year where the result of these efforts would be considered as being the most important and advantageous for American Pharmacy. That no bar be placed as to the candidate's profession or kind of work accomplished."

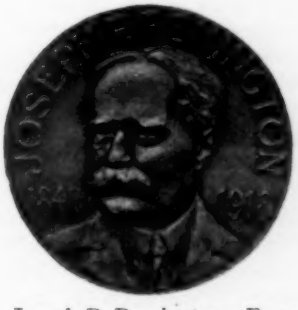
"That the medal be awarded by a standing committee consisting of all the past-presidents of the AMERICAN PHARMACEUTICAL ASSOCIATION, and in case the number of living past-presidents is less than five, the senior past vice-presidents of the ASSOCIATION be drawn upon in sufficient number to create a committee of five."

The secretary of the New York Branch is to act as secretary of this standing committee; the medal is to be presented by the Senior Past-President of the Branch, or, in case of inability, by other past-presidents in the order of their seniority.

SAMUEL L. HILTON—THE 15TH REMINGTON MEDALIST.

Samuel L. Hilton, Remington Medalist.

Inscription on Remington Medal.



Joseph P. Remington—Face of Medal.

The Testimonial Dinner and the award of the Remington Medal was an outstanding function at the Mayflower Hotel, Washington, D. C.—under the auspices of the New York Branch of the AMERICAN PHARMACEUTICAL ASSOCIATION, the District of Columbia Pharmaceutical Association, District of Columbia Board of Pharmacy, District of Columbia Veteran Druggists' Association; Faculty, George Washington School of Pharmacy—October 19, 1935; Augustus C. Taylor, *Chairman*.

More than 200 guests were in attendance, including members of the ASSOCIATION, of the National Association of Retail Druggists, of the Ladies Auxiliary, of local bodies, of the Reciprocity Club, relatives and friends. Hundreds of letters and messages evidenced the esteem in which the medalist is held. Mrs. Hilton was presented with beautiful flowers, and decorations added to the splendor of the reception and banquet room. Besides the District of Columbia, New York, Pennsylvania, Delaware, Maryland, New Jersey, Massachusetts, Virginia and, probably, other states were represented and few, if any, states were missing among those who sent congratulations. The toastmaster, R. L. Swain, performed his duty interestingly and expeditiously and did not take the time of the speakers. Among the latter were: Dr. Elmer Louis Kayser, dean of the Students of George Washington University and Head of the Department of History; Dr. C. W. Ballard, president of New York Branch, A. PH. A.; Dr. Harry A. Fowler, past-president of the Medical Society of the District of Columbia; Prof. E. Fullerton Cook, chairman of the Revision Committee, United States Pharmacopœia; Dean Theodore J. Bradley, of Massachusetts

College of Pharmacy; Secretary E. F. Kelly, of the AMERICAN PHARMACEUTICAL ASSOCIATION; Dean H. V. Arny, Columbia University College of Pharmacy; and Mrs. S. L. Hilton who graciously acknowledged flowers and the words of greeting. There were songs by Carson P. Frailey and Miss Agnes Fealy and accompaniments by Mrs. A. C. Taylor.

Having given an outline of the delightful function, a few words from each of the addresses, including that of the recipient of the medal, follow:

Dr. Kayser referred to the high regard in which Dr. Hilton is held and the valuation placed on the information given the pharmacy students.

Dr. Ballard explained the procedure in the medal award and the pleasure of New York Branch in making the presentation.

Dr. Fowler spoke of his relation with the well and favorably known pharmacist and the information received on many occasions from him. The major portion of the address dealt with the important part of pharmacy in the progress of medicine.

Professor Cook discussed the work involved in pharmacopœial revision and the devotion to and unselfish contributions made during many years by Dr. Hilton without fear or favor, so that the best results may be obtained, and referred to improvements which resulted from his suggestions.

Dean Bradley introduced his remarks by a number of well-told stories, a happy faculty which marks him as a speaker on occasions of this kind. He then referred to the guest of honor as one who is ever ready to render unselfish service without thought of personal favor, and spoke of many years of friendship and mutual association activities.

Secretary Kelly interspersed his remarks with a story here and there. He referred to the many years of acquaintance, the sterling qualities which contributed largely to the success of the building project and credited the medalist with the performance of essentials that resulted in the beautiful structure. His efforts on a number of occasions cleared situations that required the guidance of one who knew of relations that existed and of one who had contacts, developed through years of acquaintance, and possessed information relative to civic and governmental affairs. When the time came that work could be started on the foundation of the building the knowledge possessed by "Sam Hilton," who as a lad played in this section on the very grounds now occupied by the INSTITUTE OF PHARMACY, was of great value. From the time that the first stone was placed, day by day, as the structure took shape, this enthusiast visited the site. Of no other person can it be said that he has as intimate an acquaintance of the location, ground, sand, mortar, stone and equipment as the guest of honor. On later occasions, when it became necessary to adjust other matters, it was again the information and acquaintance possessed by him which were essentially helpful.

Carson P. Frailey paid tribute by his words in the song, "Friend of Mine." A like appreciation (friend of mine) was given by members of the Reciprocity Club, represented as a body on this occasion.

The presentation of the medal was made by Dr. H. V. Arny, who referred to the quality of service rendered by the recipient of the medal which it was his pleasure to present. He considered this a great honor and congratulated him as a faithful member and the ASSOCIATION upon so worthy a son of American Pharmacy.

### ABSTRACT OF REMARKS BY THE MEDALIST.

After impromptu appreciative references to the toastmaster and the speakers of the evening the recipient greeted them, the members of the Committee of the New York Branch and other participating organizations.

In his introductory remarks he acknowledged the honor of being deemed worthy of the award and extended thanks and referred to the thought which resulted in the memorial to a leading American pharmacist and the plan by which it is perpetuated.

Continuing, he spoke of his early acquaintance with Professor Remington, in 1890, and the friendship formed was strengthened on the journey with him and other distinguished pharmacists to New Orleans in 1891, when he attended the first meeting of the AMERICAN PHARMACEUTICAL ASSOCIATION. He referred to a conference on pharmacopœial matters in Washington when the hours of the delightful evening ended at 4 o'clock in the morning.

On many occasions thereafter it was his pleasure to be with Professor Remington—in the

class room, in the home and the annual meetings of the ASSOCIATION. He spoke of Remington's outstanding qualities of leadership and happy conversation; his ability to adjust difficulties and promote successful organization work, whereby improvements were made effective by the ASSOCIATION. He spoke favorably of his chairmanship in pharmacopœial revision and authorship. In concluding his remarks the medalist referred to his happiness as a result of work and again expressed thanks and appreciation for the honor conferred.

Moments of visitations among friends closed the evening's ceremonies.

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## PHARMACY AND THE PUBLIC HEALTH.

BY ROBERT P. FISCHELIS.

Lateness in the month prevents extended reference to the timely Radio address ushering in Pharmacy Week, by former president, Robert P. Fischelis, of the AMERICAN PHARMACEUTICAL ASSOCIATION delivered from station WEAF, New York, over the Red Network of the National Broadcasting Co., on Saturday evening, October 19th, 7:45–8:00 P.M.

Reference to an article by a prominent physician, writing in one of the national magazines, in which he referred to Pharmacy as "a vanishing profession," served in part as a text. Rather than not do justice in making brief abstracts the concluding remarks of the address only are quoted:

"In the observance of National Pharmacy Week, October 20th to 26th, the professional pharmacists of America will again demonstrate to the public through displays in their shop windows that they are keeping alive the best traditions of the medical profession in all its branches. It is significant that during the past year the two annual awards for outstanding achievement in pharmacy have been made on the basis of activities involving retail pharmacists. The Ebert Prize which is annually awarded by the AMERICAN PHARMACEUTICAL ASSOCIATION for scientific achievement was given to Professor Andrews of the University of Maryland for his researches on methods of improving the accuracy of prescription compounding. The Remington Honor Medal awarded annually by the New York Branch of the AMERICAN PHARMACEUTICAL ASSOCIATION to the person, who, in the opinion of the majority of ex-presidents of the ASSOCIATION, has done most for American Pharmacy in the preceding year or over a period of years, is being awarded to-night in the City of Washington to Samuel L. Hilton, a practicing retail pharmacist of that City for activities connected with the erection of the beautiful headquarters building of the AMERICAN PHARMACEUTICAL ASSOCIATION.

"One hundred and thirty thousand registered pharmacists in nearly sixty thousand retail drug stores of the United States are thus encouraged to carry on. They believe that pharmacy is not a vanishing profession."

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## INTELLIGENT SERVICE.

Progress, development and service are the watchwords of any science or profession and pharmacy must and is doing its share in advancing the general health sciences. The corner drug store is open about 18 hours out of the 24 and the druggist is on call at all hours to supply needed medicines to the sick. The purpose of his training is, not the selling of merchandise as that is secondary, but to intelligently serve his community when medicinal supplies are needed.—C. B. JORDAN.

## WHO SPEAKS FOR AMERICAN PHARMACY?

"This question is asked repeatedly in the halls of our National and State Legislatures. It is asked by the heads of Governmental Bureaus—both national and state. It is being asked with increasing frequency by members of other professions engaged in providing medical care. It is a question which has become of more than passing interest to the public and it is a question which, in the light of recent developments, pharmacists are asking themselves, because there is a growing suspicion that what should be the right answer to the question does not coincide with the facts as we find them."—Dr. Robert P. Fischelis in an address at the annual meeting of the National Association of Retail Druggists, Cincinnati.

# EDITORIAL NOTES

## RED CROSS ROLL CALL.

Red Cross service is as wide as humanity's ills, meeting all manner of distress on the basis of individual and community need. Its two-fold programs of cure and prevention range in scope from the ministering to victims of disasters to teaching how to bandage a cut finger. There is scarcely a situation of human suffering which the Red Cross is not called upon to meet.

Even a volunteer organization such as the Red Cross must have funds with which to carry on and these are provided by the four million men and women who annually join the Red Cross and whose membership dues support its activities.

Join at Roll Call, November 11th–28th.

AN APPRECIATION
THE PHARMACY EXHIBIT at the 1933-34 Century of Progress Exposition at Chicago, which was conceived and developed by the committee appointed for this work, has shown the development of American Pharmacy to millions of people from every part of the world. This scroll is presented by the AMERICAN PHARMACEUTICAL ASSOCIATION as a token of appreciation to

Reduced etching of scroll presented to H. C. Christensen, Julius Riemenschneider, and Frank A. Kirby. See page 817, September JOURNAL A. PH. A.

## RECOGNITION OF OUTSTANDING SERVICES FOR PHARMACY AT CENTURY OF PROGRESS EXHIBITION.

The AMERICAN PHARMACEUTICAL ASSOCIATION expressed its appreciation by individual scrolls to H. C. Christensen, Julius Riemenschneider and Dr. Frank B. Kirby for their valuable services in connection with the work represented by the Pharmacy Exhibit at the Century of Progress Exposition, Chicago.

Miss Esther H. Barney served with distinction in superintending the exhibit and Thaddeus Niemiec was in charge of the pharmaceutical dispensing. A copy of the scroll presented to Miss Barney is shown in the *C. R. D. A. News* for October 5th, page 56. The scroll awarded to her is signed by the Local Committee: H. C. Christensen, Julius Riemenschneider and Frank B. Kirby and by President R. L. Swain and Secretary E. F. Kelly of the AMERICAN PHARMACEUTICAL ASSOCIATION. The same applies to the scroll of Thaddeus Niemiec.

## THE BADIANUS MANUSCRIPT.

The Magazine Section of the *Washington Post*, October 13th, features an article on "Strange Discovery—First Book of Plant

Science" by Dr. Frank Thone. Dr. Emily Walcott Emmart contributed an interesting paper to the Section on Historical Pharmacy, A. PH. A. on the subject, printed in the JOURNAL, A. PH. A. for September, pages 771–774. Since then Dr. Emmart has visited the Vatican Library, examined the book and was granted permission to photograph it. The manuscript

is 6 by $8^1/_4$ inches, bound in crimson velvet; it is clearly written in Latin and Aztec. The text is exquisitely illustrated with pictures which retain their brilliancy of color; these have been copied in water-color sketches, through the kindness of Dr. Charles G. Abbott, of the Smithsonian Institution. A half-tone from the photograph mentioned is shown herewith.

## NEWER PRESERVATIVES USED IN PHARMACY.

Most of the early work in the esters of *p*-hydroxybenzoic acid was summarized by S. Back (*P. J.*, 128, 328 (1932)). Later, H. Burlinson (*Quart. J. Pharm. Pharmacol.*, 7, 489 (1934)) found the propyl and ethyl esters to be efficient for the preservation of mucilage of tragacanth. The propyl derivative in a concentration of 0.05 per cent appeared to be the best preservative for the mucilage. The author has found that a 1 per cent w/v solution of tartaric acid in water, in which ordinarily a mold appeared within twenty-four hours, may be preserved by the addition of 0.05 per cent of methyl *p*-hydroxybenzoate or 0.01 per cent of propyl *p*-hydroxybenzoate. In the case of fresh infusion of calumba, while 10 per cent of alcohol (90 per cent) effectively preserved it, 0.15 per cent of methyl-*p*-hydroxybenzoate preserved it for four days only, while the propyl ester had practically no preservative effect in strengths up to 0.075 per cent.—E. E. NYE (*Austral. J. Pharm.*, 590, 183 (1935); through *The Pharmaceutical Journal* of July 6, 1935).

## ASSESSING ABILITY TO PAY.

Physicians, dentists, pharmacists, members of hospital staffs and nurses of Omaha and county will be included among the members of the Omaha, Douglas County Central Health Service Association which will seek to reduce the charity rolls. Each low-income patient will be questioned regarding his or her ability to pay; then a card will be given stating the ability to pay—one-fourth, one-half or whatever portion is determined. When the patient visits the doctor a card conforming to schedule is presented and the physician charges the proportion designated. Similar procedure follows in prescription service.

## KENTUCKY U. S. P. EXHIBIT.

The *Journal of Kentucky Pharmaceutical Association* for October carries on its cover a print of the U. S. P. Exhibit made at the annual meeting of the Kentucky State Medical Association, sponsored by this organization, the Kentucky State Pharmaceutical Association, Jefferson County Medical Society and Louisville Retail Druggists' Association. Along with the display, coöperative publicity material was distributed which gave information relative to U. S. P. chemicals and proprietary products; preparations of the Pharmacopœia and those known under proprietary designations.

The display and coöperation are helpful evidence in the interest of public health and better professional service.

## THE YEAR BOOK AND MONTHLY ABSTRACTS.

The *Rocky Mountain Druggist*, for October 1935, gives an interesting outline of the subjects considered in the YEAR BOOK for 1933 and comments favorably on this work as well as the publication of the monthly abstracts of pharmaceutical literature which have appeared in the JOURNAL of the A. PH. A. since the March issue.

In closing the review, the *Rocky Mountain Druggist* states the publication of "Pharmaceutical Abstracts" will make available each month a comprehensive review of literature for retailers, wholesalers, manufacturers, teachers, editors, research workers and all others connected with the profession and industry of pharmacy and marks another step in the enlarged service which the ASSOCIATION plans for all who are interested in professional and industrial pharmacy.

Appreciation is expressed for the detailed comment.

The October "Pharmacy Week" issue of the *Druggists' Circular* may be designated a work of art, brilliantly conceived and executed, containing also timely articles by Dr. Charles H. Mayo, of the Mayo Clinic, Rochester, Minn.; Dr. Lloyd K. Riggs, director of research and Prof. George C. Schicks, of Rutgers University College of Pharmacy; Dr. H. A. B. Dunning and others.

A prominent feature of the issue is the five-page section of photographs of the AMERICAN INSTITUTE OF PHARMACY, Washington, taken specially for the publication by Underwood & Underwood.

## INFANTILE PARALYSIS SERUM.

A serum, said by Dr. E. C. Rosenow of the Mayo Foundation to be effective in the treat-

ment of infantile paralysis, was demonstrated in Louisville before members of the Kentucky State Medical Association. A conference was convened in San Diego, called by President Roosevelt to make Nation-wide plans to eradicate infantile paralysis and to promote measures designed to lessen the handicap of those who have been crippled by the dread disease. The work outlined is to be under the Warm Springs Foundation.

Infantile paralysis has never attained the epidemic proportions of the plagues which ravaged civilization in earlier periods, but when it is considered that 75 per cent of the 17,000 patients admitted to one of the Scottish Rite Hospitals for Crippled Children, have suffered from disease or deformity originating in the infantile paralysis, it becomes everybody's responsibility, because no one is free from the attack, or members of the family may be stricken.

## PERSONAL AND NEWS ITEMS.

**Preston Dunn,** druggist of Eskridge, Kans., has been elected commander of the Kansas department of the American Legion. He is a former mayor of Eskridge.

**Hans Heger's** 80th birthday was celebrated by the Austrian Pharmaceutical Society, of which he is the secretary. He is also active in an editorial capacity of the official Austrian pharmaceutical publications. Congratulations are extended and best wishes for continued health.

**President A. C. Taylor,** of the District of Columbia Pharmaceutical Association, warns pharmacists to be careful relative to returns under the law requiring payment of tax on cosmetics and toilet preparations. He refers particularly, in this instance, to rose water and glycerine.

**Dean A. Richard Bliss, Jr.,** of the School of Pharmacy of Howard College of Birmingham, Alabama, represented Columbia University at the inauguration of Doctor Alfred Benjamin Butts as Chancellor of the University of Mississippi on October 19th.

**Dr. C. H. Searle** advises that a research fellowship has been established at the State University of Iowa, under the supervision of Dr. Henry Gilman, professor of Organic Chemistry, and another fellowship at the University of California Medical School, under the supervision of Dr. C. D. Leake, professor of Pharmacology.

**Dr. Francisco Cignoli,** of Buenos Aires, has favored us with a reprint on National Formularies. The writer is much interested in the JOURNAL OF THE A. PH. A. The reprint is in Spanish, the following formularies are discussed from an historical and present viewpoint. The National Formulary, American; Brazil; Germany (Ergänzungsbuch); Great Britain (The Pharmaceutical Codex); France, "Formulaire Generale des Pharmaciens Francais;" Belgium, Formulaire National. Military and hospital formularies also receive attention.

**J. A. Reese** has been appointed to a graduate fellowship at the University of Florida.

**T. D. Rowe,** of the University of Montana, succeeds J. A. Reese at the School of Pharmacy, Medical College of Virginia.

**Dr. R. Eder,** Institute of Pharmacy, Zurich, Switzerland, contemplates making a visit to the United States. He hopes to be in this country about the middle of November.

*The Evening Sun* (Baltimore) of October 1st, speaks editorially of **Sir Henry Wellcome** in connection with the medal associated with his name and awarded for valuable military service. The medal has recently been awarded to Major Leon A. Fox, U. S. A., attached to the 104th Medical Regiment.

Radio talks by **Frederick J. Wulling,** dean of the College of Pharmacy, University of Minnesota, are delivered each Wednesday over WLB, 1:00 to 1:15 P.M., from October 23rd to November 27th, inclusive, on the following subjects: "Pharmacy Week Anniversary," "Pharmacy and the Public," "Famous Discoveries by Pharmacists," "Medicines Obtained from Animals," "Medicines Obtained from Bacteria" and "Drugs Mentioned in the Bible."

*Abstracts of Scientific Literature* have been prepared by the staff of the Library of E. R. Squibb & Sons, Miss E. Pickering, *Director*, contributed through the courtesy of F. W. Nitardy and published under the auspices of the U. S. P. Board of Trustees.

### PHARMACY WEEK IN THE DAILY PRESS.

The interest in pharmacy has been evidenced in the Press by editorials and most of the articles coming to our attention have expressed a helpful purpose to promote professional pharmacy. Every day during Pharmacy week these editorials have appeared emphasizing that the annual occasion is worthy of public attention and that "the present trend is to

make the prescription department the heart of the store, with ware and apparatus accurate, immaculate and aseptic."

### MONTANA EARTHQUAKES.

A property loss of several million dollars on October 19th was reported from earthquakes and fire damages. Several deaths and many injuries were reported; the American Red Cross is active and helpful, and Helena officials soon had the situation well in hand.

### FUNCTION OF MUSEUMS.

Museums may be storehouses, but little else; the collecting, labeling and arrangement seem to be the only reasons for their establishment. A museum's existence should be justified by the extent to which it gives information and understanding. A museum should have a purpose to serve the students of the subject which is displayed.

## OBITUARY.

### L. E. HIGHLEY.

L. E. Highley, one of the pioneer pharmacists of South Dakota—member of the AMERICAN PHARMACEUTICAL ASSOCIATION since 1913—died September 16th in Rochester, Minn., following an illness of several weeks.

Mr. Highley was born in Storm Lake, Iowa, March 13, 1876. With his parents he moved on February 14, 1887, to Whitewood, S. D., where he received his grade school education. He was graduated from the pharmacy department of the State University of Iowa on March 17, 1897.

For thirty-five years Mr. Highley had been in the drug business in Hot Springs, and during that time took a prominent part in helping to shape the development of the city. He was a member of the Masonic lodge, the Kiwanis club and the Chamber of Commerce. He served three terms in the South Dakota state senate in the years, 1909, 1928 and 1930 and contributed largely to the passage of South Dakota pharmacy laws.

Mr. Highley was serving his fourth term as mayor of Hot Springs, and it was in large measure his careful attention that has placed its affairs on a sound financial basis.

Besides his wife, Mr. Highley is survived by three brothers, George, Edgemont; William, Whitewood; Elmer, San Francisco.

### WALTER TREAT WALKER.

Walter Treat Walker, Vice-President-In-Charge-of-Sales of the Kimble Glass Company of Vineland, N. J., died suddenly at White Sulphur Springs, West Virginia, Wednesday evening, October 2nd. Mr. Walker was fifty-two years of age, a graduate of the Sheffield Scientific School of Yale University, and a member of the Yale Club of New York City, and the Penn Athletic Club of Philadelphia. He was also a charter member of the American Legion, having served in the Air Section of the United States Signal Corps with the rank of Captain. He is survived by his widow, Mrs. Kate Walker, and his eight-year-old son, William.

### DR. CARL DUISBERG.

The death is announced of Dr. Carl Duisberg at the age of 73. Dr. Duisberg was the founder and president of the German Dye Trust and the inventor of aspirin. He joined the staff of the Laboratory Elberfeld Dye Factories of Fr. Bayer and Co. when he was 21, and ultimately he became the company's managing director. When the leading dye factories were fused into I. G. Farbenindustrie A.G. he became chairman of the Supervisory Board and of the Administrative Council of the firm. Among the many important positions he held were chairman of the Reich Federation of German Industry, member of the Reich Health Bureau and Cologne Railway Council, and member of the Prussian Academy of Science.

### HENRY C. BIDDLE.

The death is announced of Dr. Henry Chalmers Biddle, former dean of the College of Pharmacy of the University of California, aged 65 years. His activities included those of author, clergyman and educator. From 1901 to 1918 he taught in Monmouth College and the University of Chicago; for a period, he was acting professor in Temple University, Philadelphia. He was lecturer in San Francisco State Teachers' College from 1922 to 1931 and professor of chemistry in the University of California School of Pharmacy, and was elected dean of the institution in 1926, retiring in 1932.

## SOCIETIES AND COLLEGES.

### BALTIMORE.

The October meeting of Baltimore Branch of the AMERICAN PHARMACEUTICAL ASSOCIATION will be held on the 31st at Emerson Hotel. The speaker of the evening will be Dr. David M. R. Culbreth, Emeritus Professor of Materia Medica, School of Pharmacy, University of Maryland; elected *Honorary President* of the AMERICAN PHARMACEUTICAL ASSOCIATION. His subject will be "How can a person be satisfied and contented while making a living and a reserve for old age in the retail drug business?" A function of the evening will be the presentation of the Ebert Prize Award to Marvin J. Andrews by Secretary E. F. Kelly, A. PH. A.

C. JELLEFF CARR, *Secretary-Treasurer*.

### MEETING OF THE AMERICAN ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE.

The ninety-fifth meeting of the American Association for the Advancement of Science, together with scientific organizations associated with it, will convene in Pittsburgh during the Christmas holidays. The meetings begin on Thursday evening, December 27th, when the city and the institutions of Pittsburgh will extend an official welcome to their guests in the Carnegie Music Hall. Prof. E. L. Thorndike, the distinguished psychologist, president of the Association, in a brief address will respond for the visitors. A reception tendered by the Pittsburgh Local Committee will follow.

### STATE BOARD REQUIREMENTS.

Secretary H. C. Christensen has revised state board requirements for entrance to Registered Pharmacist examination. He is making the charts available and points out that pharmacy has taken rapid strides toward higher standards. A study of the chart shows that the four-year college course with one year of retail experience is now prevailing in most states. Only five states are without provision for compulsory college training. We hope to publish the chart later and in the meantime the information can be obtained from the Secretary, 130 North Wells St., Chicago, Ill.

### WEST VIRGINIA STATE OFFICERS.

The following officers were elected by mail ballot by West Virginia Pharmaceutical Association:

*President*, E. O. Wiseman, Fayetteville; *First Vice-President*, James A. Patterson, Martinsburg; *Second Vice-President*, W. S. Coleman, Lewisburg; *Third Vice-President*, Fred A. McFarlin, Clarksburg; *Secretary-Treasurer*, J. Lester Hayman, Morgantown; *Council Member*, Marlinton. These officers will be installed next June at White Sulphur Springs.

### GIFT TO MEDICAL COLLEGE OF VIRGINIA.

Through an anonymous gift of $300,000.00 and a federal grant of $239,850.00, an outpatient clinic building with associated medical laboratories, which has been planned by the institution for several years, will shortly go under construction. The building will be seven stories in height, the four lower floors to be assigned to clinics, the upper floors for teaching laboratories in pathology, bacteriology, biochemistry, public health and preventive medicine. *J. Pharmacy Hygiene*

### RHO CHI SOCIETY.

The annual convention of Rho Chi Society was held at the Hotel Multnomah, Portland, Oregon, on Wednesday, August 7, 1935. There were approximately one hundred members and guests present at the banquet, at which Dean R. A. Lyman, of the School of Pharmacy, University of Nebraska, was the speaker. L. W. Rising, University of Washington, was installed as the new *National Treasurer*, and Loyd E. Harris as *National Secretary*. F. J. Bacon and H. M. Burlage continue as *National President* and *National Vice-President*, respectively, for another year. Glenn L. Jenkins, University of Maryland, and Elmer H. Wirth, University of Illinois, were elected as members of the *Executive Council* for a period of two years.

LOYD E. HARRIS, *National Secretary*.

### VETERANS OF THE CHICAGO AND MILWAUKEE ASSOCIATIONS MEET.

Veterans of the Milwaukee and Chicago Associations met on October 17th, at Bismarck Hotel, Chicago. This was an exchange visit, the last meeting having been held in Milwaukee. The presidents of the two organizations presided.

Communications were read from Governor Horner and from F. W. Meissner of La Porte, Indiana. The details of the successful meeting were arranged by Secretaries Von Hermann and Mrazek.

## CHICAGO MEDICAL SOCIETY.

The Chicago Medical Society is continuing its work on the U. S. P. and N. F. A meeting of the committee was held on October 8th. Dr. J. J. Gill and Dr. Bernard Fantus were reappointed on the Committee and Dr. Otto S. Pavlick was appointed as a new member. All of them have had pharmaceutical experience and have contributed largely to therapeutics.

## DELAWARE PHARMACEUTICAL SOCIETY ISSUES MONTHLY BULLETINS.

Delaware Pharmaceutical Society is issuing a monthly bulletin of information. It is contemplated to discuss a wide variety of subjects—laws and regulations, proposed legislation, professional pharmacy, trade practices, etc. The secretary of the Society is Albert Bunin, 1713 W. 4th Street, Wilmington.

## HOSPITAL PHARMACY.

The Western New York Hospital Council, an organization composed of hospital executives, at its October meeting devoted its program to pharmaceutical problems. Three well-prepared papers were presented by hospital pharmacists on the subjects "Pharmaceutical Economics," and "The Preparation and Chemistry of Surgical Solutions."

## IDAHO STATE PHARMACEUTICAL ASSOCIATION BULLETIN.

Idaho State Pharmaceutical Association Bulletin for October 15th has an interesting account of the meeting of AMERICAN PHARMACEUTICAL ASSOCIATION by Dean E. O. Leonard. This issue also contains much of interest for Idaho druggists and part of the resolutions adopted by the National Association of Retail Druggists.

## PHARMACY RECOGNIZED LEGALLY AS A PROFESSION IN CALIFORNIA.

The Supreme Court of California has ruled that the statute prohibiting aliens from registering as pharmacists, as applied to Japanese is not invalid as conflicting with the treaty extending to Japanese citizens the right to carry on trade or to own shop as if they were citizens of the United States, since the practice of pharmacy *is a profession* and *not a trade* (St. 1933, p. 2193, —2, 3: Treaty of Commerce and Navigation between the United States and Japan, Art. 1, 37, Stat. 1504) Sashihara *vs.* State Board of Pharmacy.—*Bulletin XXXI*, W. Bruce Philip.

## MEDICAL COLLEGE SCHOOL OF PHARMACY.

Dean W. F. Rudd advises that the limit of one hundred students in the School of Pharmacy has been reached. Of the new matriculants sixteen had completed one or more years of academic college work, six have their Bachelors degrees and two their Masters and M.D. degrees.

## OFFICERS OF THE NATIONAL WHOLESALE DRUGGISTS' ASSOCIATION.

The following officers were elected by the National Wholesale Druggists' Association at the annual meeting, held at White Sulphur Springs, September 29th to October 4th: *President*, William J. Schieffelin, Jr., New York; *First Vice-President*, George B. Evans, Albany, N. Y.; *Second Vice-President*, E. A. Morrison, Meridian, Miss.; *Third Vice-President*, W. F. Terry, San Francisco, Calif.; *Fourth Vice-President*, H. M. Folsom, San Diego, Calif.; *Fifth Vice-President*, J. O. Robinson, Baltimore, Md.

*Members of the Board of Control*, J. C. O'Dell, Birmingham, Ala.; S. O. Davidson, Kansas City, Mo.; J. B. McCormick, Pittsburgh, Pa.; and Arthur S. Raymond, Lincoln, Neb.

John W. Phillips, New Orleans, was elected *Honorary-President* of the Association, and William A. Hover, Long Beach, Calif., was elected to *honorary membership*.

The Association voted to hold its 1936 convention in the Greenbrier Hotel, White Sulphur Springs, not earlier than the first week in October.

*Quoting the Oil, Paint and Drug Reporter:* "Enactment of legislation to clarify the provisions of Section 2 of the Clayton act with regard to discriminatory prices and such other legislation as may be necessary to aid in the elimination of unfair trade practices which seriously jeopardize the welfare of retail and wholesale druggists was favored by the National Wholesale Druggists' Association in a

resolution approved by its Board of Control and adopted at its sixty-first annual convention. The resolution followed discussions of the subject by President A. Kiefer Mayer, Secretary E. L. Newcomb, Robert F. Vaughan, Association counsel under the NIRA, and various committee chairmen.

"The Association considered other legislative developments of the past year, such as the Wagner Labor Bill, the Social Security Act, and State fair trade laws, and took the position that, inasmuch as the constitutionality of much of this new legislation is seriously questioned by eminent legal authority, it should adopt a policy similar to that which it followed in respect to the NIRA.

"The Association recorded itself as a proponent of the basic principles of the Nye-King bill and favored the principles involved in the Patman bill. It commended its proprietary goods committee for assistance given to manufacturers and distributors with respect to lawful operation under fair trade laws and urged that this work be continued. The Association reiterated its position with respect to food and drug legislation which will adequately protect the public but not unnecessarily handicap the drug industry."

### OFFICERS OF THE NATIONAL ASSOCIATION OF RETAIL DRUGGISTS.

The officers elected for the ensuing year by the National Association of Retail Druggists are the following: *President*, Charles Ehlers, Cincinnati, Ohio; *First Vice-President*, Z. V. Kerrigan, St. Louis, Mo.; *Second Vice-President*, Harvey L. Wertley, Philadelphia, Pa.; *Third Vice-President*, Walter H. Varnum, Lawrence, Kans.; *Secretary*, John W. Dargavel, Chicago, Ill.; *Treasurer*, H. L. Chichester, Macon, Ga.; Executive Committee, *Chairman*, Thomas S. Smith, Wilmington, Del.; George L. Second, Chicago, Ill.; Monte L. Powell, Denver, Colo.; Harvey A. Henry, Los Angeles, Cal.; John Witty, Portland, Ore.; Hugh P. Beirne, New Haven, Conn. The *Editor* of the *N. A. R. D. Journal* is George A. Bender and *Washington Representative*, Rowland Jones.

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## LEGAL AND LEGISLATIVE.

Executive Officer A. C. Hill, Jr., has addressed former code authorities, stating that in cases where the records and files of former Code Authorities are in danger of loss or destruction due to liquidation, or lack of facilities for storage, the custodians thereof should immediately contact the National Recovery Administration in order that it may arrange for proper storage. Confidential records will, of course, be preserved as such.

### TEXAS LEGISLATURE PROVIDES FOR LICENSES.

The Texas Legislature has provided license fees as follows: Upon one store the license fee shall be $1.00; upon each additional store, in excess of one and not to exceed two, the license fee shall be $6.00; upon each additional store in excess of two but not to exceed five, the license fee shall be $25.00. Further assessments are fixed upon each additional store in excess of five and not to exceed ten, $50.00; upon each additional store in excess of 10 but not to exceed 20, the license fee shall be $150.00; up to 35, a $250.00 license is assessed; upon each additional store in excess of 35 but not to exceed 50, the license fee shall be $500.00; and for each additional store in excess of 50 the license fee shall be $750.00.

### LEGALIZING PRICE AGREEMENTS BY AMENDMENTS TO SECTIONS 1 AND 45, TITLE 15, U. S. CONGRESS.

"*Sec. 1. Contracts in Restraint of Trade among States Illegal.*—Every contract, combination in the form of trust or otherwise, or conspiracy, in restraint of trade or commerce among the several states, or with foreign nations, is hereby declared to be illegal; *provided that nothing herein contained shall render illegal, contracts or agreements prescribing minimum prices for the sale or resale of a commodity which bears or the label or container of which bears, the trade-mark, brand or name of the producer or owner of such commodity and which is in fair and open competition with commodities of the same general class produced by others, when such contracts or agreements are lawful under any statute now or hereafter in effect in any State, Territory or the District of Columbia in which such sale or resale is to be made, and the making of such contracts or agreements shall not be an unfair method of competition under Section 45, Title 15, U. S. C.* Every person who shall

make any contract, or engage in any combination or conspiracy *declared to be illegal by this act*, shall be deemed guilty of a misdemeanor, and, on conviction thereof, shall be punished by fine not exceeding five thousand dollars or by imprisonment not exceeding one year, or by both said punishments, in the discretion of the court."—*Drug World*.

### PROPOSED NEW YORK HEALTH CODE CHANGES.

The *Drug World* gives the following as the principal points in the proposed amendments to the New York City Sanitary Codes:

"1. Every proprietary medicine or cosmetic sold in New York City shall be registered with the Board of Health at an initial annual cost of $25.00 and renewal cost of $10.00.

"2. Products listed in the latest revision of the U. S. Pharmacopœia or National Formulary are excepted. Also excepted are proprietaries, each container of which bears the notice 'May not be sold except upon a doctor's prescription.'

"3. A Certificate of Registration may be denied or revoked if a false or misleading statement is made in the application for registration; for false or misleading advertising; for a claim that a product is a cure; if the product contains poisons or dangerous substances in quantities to make it potentially harmful; if the product contains alkaloid cocaine, alpha or beta eucaine, more alcohol than needed for solvent or preservative, or alcohol not sufficiently medicated to be unfit for beverage purposes; if it contains methyl alcohol, more than lawful quantities of opium or any radio-active ingredient; if a formula, name or label is changed without approval of the Board of Health.

"4. The amendments shall become effective June 1, 1936, but shall not apply to stocks in the hands of persons other than manufacturers at that time.

"5. Applications for registration shall give name of product, name and address of applicant (if applicant has no New York address, address of agent on whom papers can be served), place of manufacture and by whom, name or chemist or pharmacist in continuous supervison, exact text of every judgment, decree or stipulation ever issued in connection with the product, therapeutic and other beneficial effects claimed, exact form of label on retail package, all literature distributed in connection with the product, exact text of all advertising material to be used in any manner within the following three months, a sworn statement of the quantitative and qualitative formula, a sample of the product and container."

### WISCONSIN FAIR TRADE ACT IN COURT.

A test case has been started in the circuit court at Milwaukee involving the Wisconsin Fair Trade Act. The plaintiff is the Wisconsin Wine & Spirit Importers Co. The defendant attacks the constitutionality of the Act on the grounds that it unlawfully attempts to legalize price fixing. The fair trade act became a law in Wisconsin several months ago. Wisconsin pharmacists originated agitation for the act and were prime movers in the formation of the Wisconsin Federation of Independent Associations which sponsored the bill.

### VITAMIN C EASILY DESTROYED.

In general vitamin C is the most easily destroyed of all the known vitamins; also it is easily soluble in water so that rejection of cooking water or the "water" of such canned vegetables as asparagus, peas or string beans may result in the loss of a large part of the vitamin C which had escaped destruction; and, furthermore, fruits are often preserved, prepared and eaten with such large amounts of added sugar that the vitamin value (and mineral content) is materially diluted and at the same time the consumption of actual fruit diminished because of the extent to which the sugar satiates the appetite.—SHERMAN, H. C.: "Food and Health," New York, MacMillan Company, 1934, through *Journal A. M. A.*

## BOOK NOTICES AND REVIEWS.

*Medicinal Plants of France.*—The Center for Technical and Economic Documentation on Medicinal and Aromatic Plants (formerly the National Office of Primary Vegetable Materials for the Perfumery and Drug Trades), continuing the work begun, has just published a new series of engravings, in color, of wild and cultivated medicinal plants, representing the *first edition of the 3rd and last volume;* the first two volumes containing two articles and 104 plates, representing the complete collection up-to-date. A few of these series are exhausted and will not be published again.

Due to its consistently perfect execution and its scientific and artistic value, this *13th Series* will be appreciated just as much as the previous

series by every one interested in botany and *materia medica*. It will be of the same service to collectors and cultivators of medicinal and aromatic plants, and also useful in various kinds of studies. The 8 plates composing this 13th Series represent: Black Mustard, White Mustard and Field Mustard, Cerise Laurel and Common Laurel, Odoriferous Asperule and Garance, Chiendents (Dog Teeth), Petit Houx and Officinal Asparagus, Reglisse and Galega, Ricin (Castor), Grande Absinthe and Marine Absinthe.

## NOTICE TO CONTRIBUTORS TO THE JOURNAL AMERICAN PHARMACEUTICAL ASSOCIATION.

The following notice has been prepared from comments received from members of the Board of Review of Papers and of the Publication Committee.

Manuscripts should be sent to Editor E. G. Eberle, 2215 Constitution Ave., N. W., Washington, D. C.

All manuscripts should be typewritten in double spacing on one side of paper $8^1/_2$ x 11 inches, and should be mailed in a flat package—not rolled. The original (*not* carbon) copy should be sent. The original drawings, not photographs of drawings, should accompany the manuscript. Authors should indicate on the manuscript the approximate position of text figures. All drawings should be marked with the author's name and address.

A condensed title running page headline, not to exceed thirty-five letters, should be given on a separate sheet and placed at the beginning of each article.

The method of stating the laboratory in which the work is done should be uniform and placed as a footnote at end of first page, giving Department, School or College. The date when received for publication should be given.

Numerals are used for figures for all definite weights, measurements, percentages, and degrees of temperature (for example: 2 Kg., 1 inch, 20.5 cc., 300° C.). Spell out all indefinite and approximate periods of time and other numerals which are used in a general manner (for example: one hundred years ago, about two and one-half hours, seven times).

Standard abbreviations should be used whenever weights and measures are given in the metric system, *e. g.*, 10 Kg., 2.25 cc., etc. The forms to be used are: cc., Kg., mg., mm., L. and M.

Figures should be numbered from 1 up, beginning with the text-figures (line engravings are always treated as text-figures and should be designated as such) and continuing through the plates. The reduction desired should be clearly indicated on the margin of the drawing. All drawings should be made with India ink, preferably on white tracing paper or cloth. If coördinate paper is used, a blue-lined paper must be chosen. Usually it is desirable to ink in the large squares so that the curves can be more easily read. Lettering should be plain and large enough to reproduce well when the drawing is reduced to the width of a printed page (usually about 4 inches). Photographs intended for half-tone reproduction should be securely mounted with colorless paste.

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(1) Author, A. Y., *Am. J. Physiol*, 79, 289 (1927).

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